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JULY 6
1939

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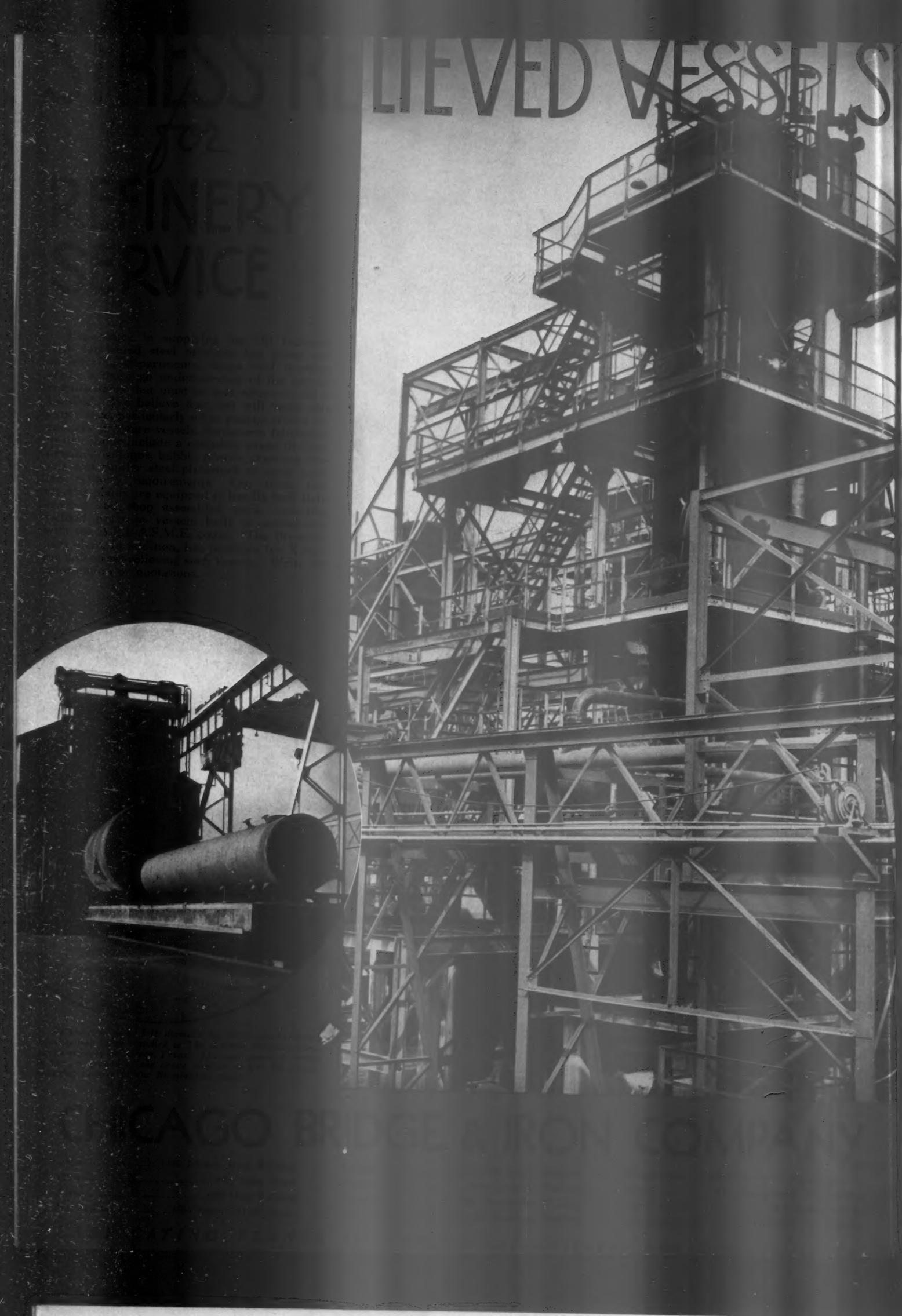
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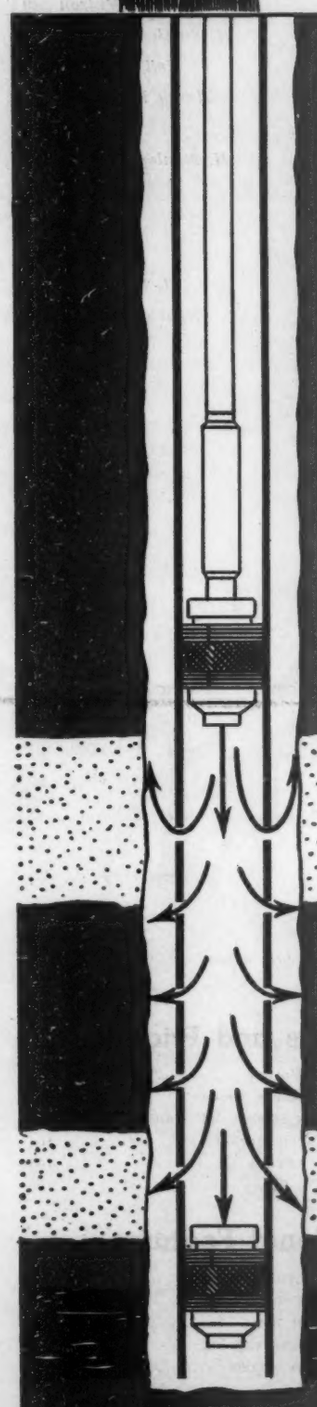
WATER EXCLUSION

BY SQUEEZE CEMENTING

A RESULT THAT THE BAKER CEMENT RETAINER IS ACCOMPLISHING FOR OPERATORS DAILY



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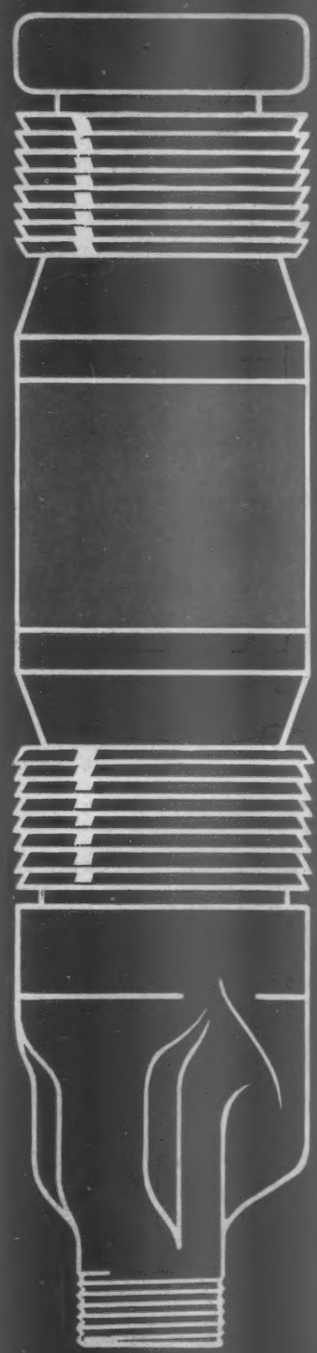

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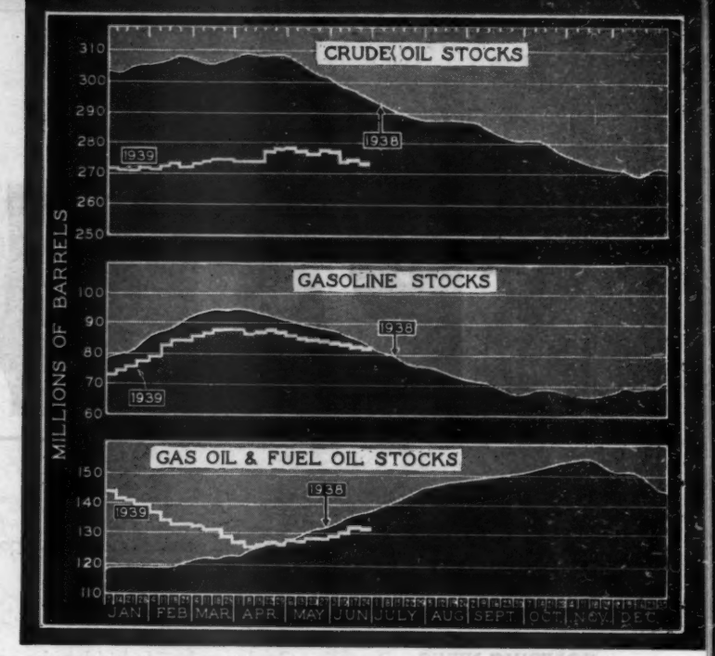
Trends

Inventory Trends Point to Need for Lower Crude Runs



THE need of curtailing crude runs to stills in order to bring about a better balance between supply and demand for refinery products is being emphasized by those who are hopeful that the next 60 days of maximum gasoline consumption will witness sustained improvement in the industry's statistical and pricing positions. The definite suggestion is being made that refiners as a group cease to supply part of their crude requirements from storage to the end that any reductions in inventories for the immediate future at least will be finished products rather than than crude oil.

These observers cite recent data which are summarized and charted on this page and the price charts on Page 102 in support of their contention. It is pointed out that for the three weeks ending June 24, crude oil stocks were reduced 5,650,000 bbl. or 270,000 bbl. daily. The bulk of this reduction—210,000 bbl. daily—was in Texas with most of the remainder in California.

This indicates that several Texas companies are maintaining or expanding their refinery operations and pulling on storage for a substantial part of their crude shipments. This policy has two immediate effects. It has reduced the current outlets for Texas crude and has maintained refinery operations above recommended levels, a direct factor in the failure to advance wholesale and retail quotations to levels required for profitable operation. Available information indicates that refinery operations during June were 300,000 bbl. higher than in June last year. Data are presented to show that if crude runs to stills had been 150,000 bbl. less than they were last month reductions in gasoline stocks would have been much greater with no additions to fuel oil inventories. It is contended that this situation is particularly important in Texas and the Louisiana Gulf Coast, which furnish the bulk of the crude refined at Gulf Coast and Atlantic Seaboard refineries. The gasoline inventory position of East Coast refineries has been and is now more unsatisfactory than any other major area.

CRUDE PRODUCTION *3,460,285 bbl. daily average—down 3,371 bbl. One year ago 3,046,483 bbl.*

CRUDE STOCKS *272,297,000 bbl. as of June 24—down 2,555,000 bbl. One year ago 293,463,000 bbl.*

GASOLINE STOCKS *81,733,000 bbl. as of June 24—down 924,000 bbl. One year ago 82,054,000 bbl.*

GAS AND FUEL OIL STOCKS *131,823,000 bbl. as of June 24—down 12,000 bbl. One year ago 136,949,000 bbl.*

REFINERY RUNS *3,430,000 bbl. daily week ending June 24—down 50,000 bbl. One year ago 3,129,000 bbl.*

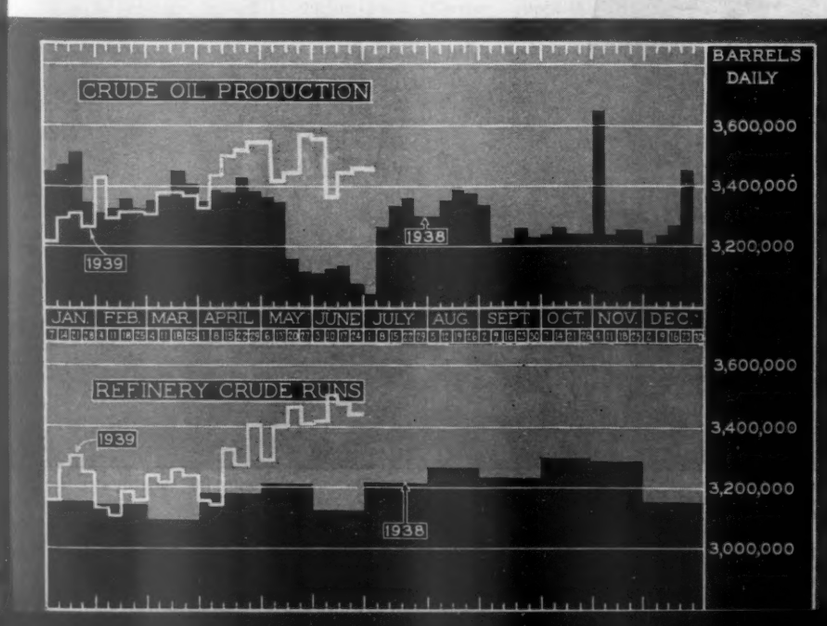
(Later A.P.I. figures on refinery stocks and runs not available owing to Independence Day holiday)

DAILY AVERAGE PRODUCTION FOR WEEK

	July 1, 1939	Bur. Mines July est. of demand	July state allowables	June 24, 1939
Oklahoma City	90,800	.....	.....	108,125
Seminole fields	47,950	.....	.....	47,600
Remainder of state	313,200	.....	.....	303,025
Total Oklahoma	451,950	456,100	428,000	458,750
East Texas	372,798	.....	.....	372,748
West Texas	218,900	.....	.....	217,750
North Central Texas	118,697	.....	.....	118,000
Texas Panhandle	69,000	.....	.....	69,496
East Central Texas	92,296	.....	.....	92,898
Gulf Coast Texas	341,850	.....	.....	339,595
Southwest Texas	98,600	.....	.....	98,352
Total Texas	1,312,141	1,426,500	1,355,598	1,308,839
North Louisiana	71,640	.....	.....	73,585
Gulf Coast Louisiana	199,600	.....	.....	196,500
Total Louisiana	271,240	264,500	263,023	270,085
California	594,100	595,200	595,000	608,750
Kansas	169,100	160,300	165,890	168,025
Arkansas	59,005	53,900	57,641	56,500
Eastern fields	96,000	105,900	.....	96,400
Illinois	244,065	187,400	.....	232,436
Michigan	68,604	53,200	.....	66,591
New Mexico	116,780	116,100	113,000	116,800
Rocky Mountain	77,300	94,100	.....	80,480
Total United States	3,460,285	3,513,200	.....	3,463,656

It is felt that with the exception of Illinois, the crude production operations which have been projected for July are favorable for this program of curtailing refinery operations. The total allowables announced in seven states for July are only 50,000 bbl. daily above the June allowables, an increase which can be absorbed by the seasonal gain in demand.

There have been no general changes in price conditions over the past week. No complaint is heard in regard to gasoline demand. The large supply available, due to the high level of refinery operations, apparently explains the lack of general support for advances in product prices.



SPARKS . . . FROM THE NEWS

ENOUGH: A production of 244,000 bbl. daily and a new pool in a new county are all that Illinois had to offer last week.

SOBERING NEWS: President Cardenas has forbidden the sale of intoxicants in the petroleum fields and important industrial cities of Mexico.

AH-RIZONA: It is now reported that the Arizona discovery credited with a potential of 260 bbl. was figured on a hypothetical calculation which remains to be proved.

MONSTER CONSUMER: Completion this week of the first round trip by a scheduled American airliner between Europe and the United States is pleasant news to motor fuel suppliers.

A MISSED BET?: Millions to whom the oil industry has meant merely gas and oil for the family car are getting a better understanding at the two world's fairs. Has the industry taken full advantage of this opportunity to tell the public its story?

STILL HAVE CONSTITUTION: Those responsible for application of proration are learning that individual rights are still protected by constitutional guarantees.

PERTINACITY: Recent discovery of oil near Liverpool encourages Englishmen who believe in sticking to it.

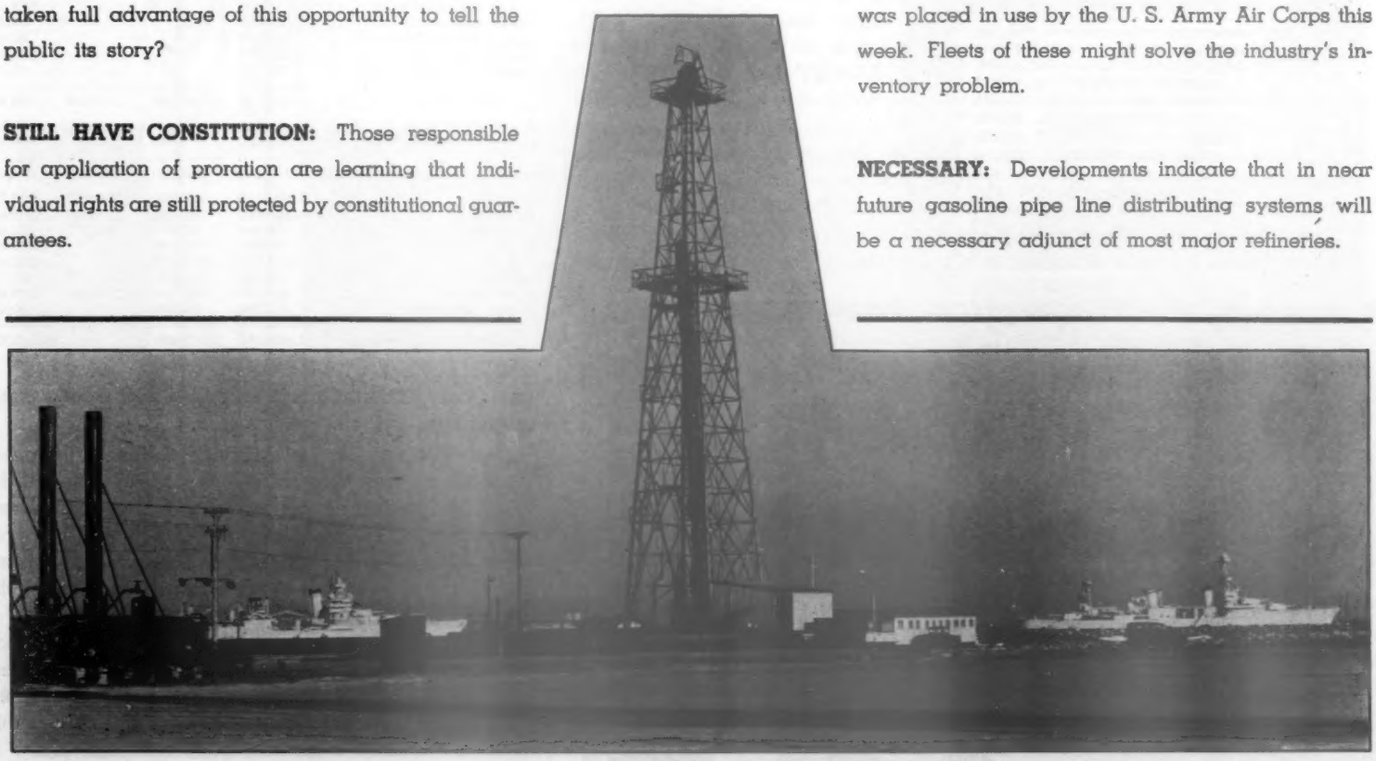
PRORATION ATTACK: Reduction of Lorraine pool well allowables from 25 to 15 bbl. will result in waste and abandonment of wells, operators allege in an attack on a Kansas proration order.

MATURITY: The Oklahoma City field, once a boisterous, sometimes recalcitrant factor in the industry, is a symbol of orderliness now as it begins its program of reclamation.

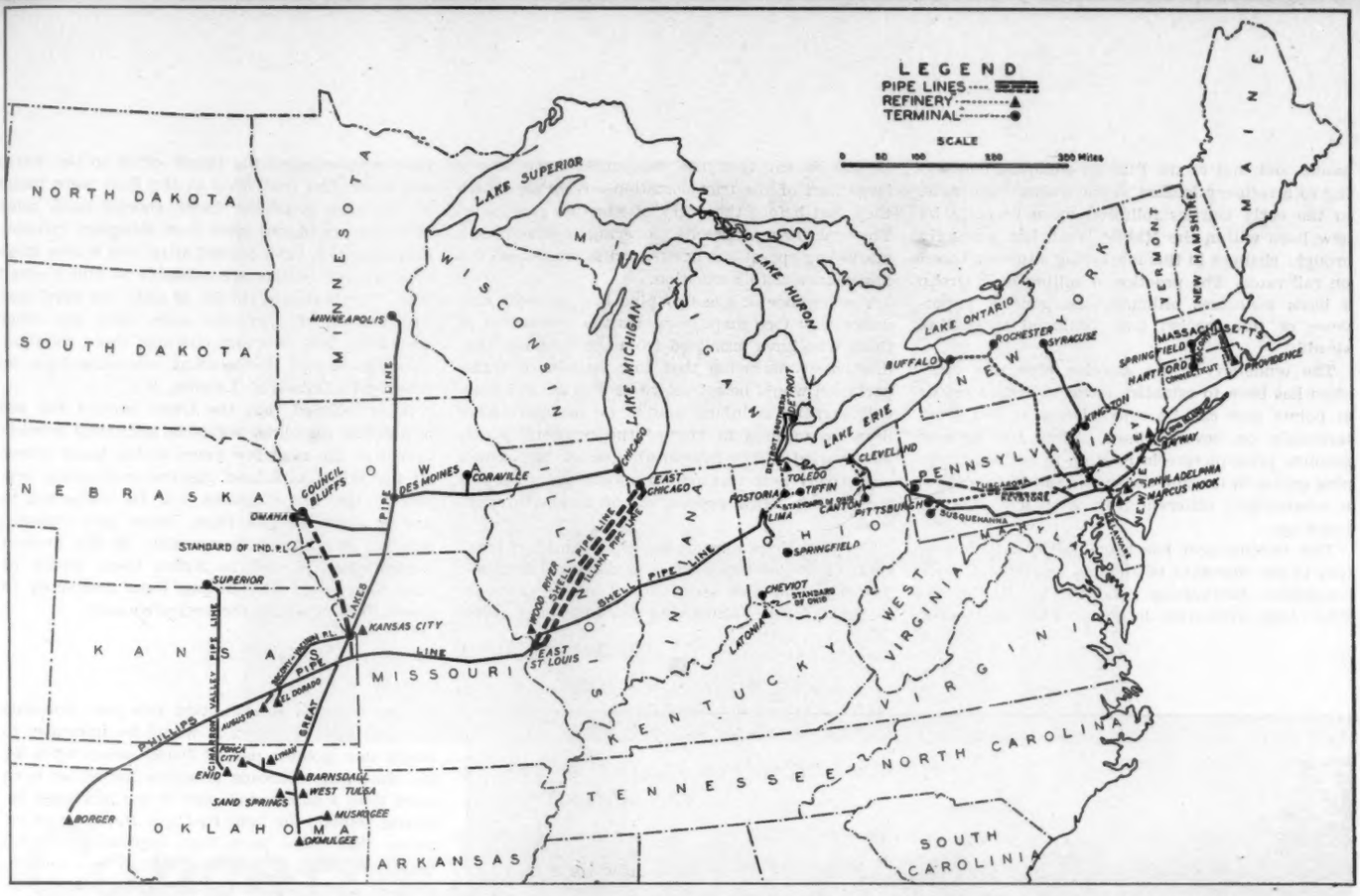
PREPAREDNESS: Indiana State Bar Association plans a meeting on oil and gas laws, July 7 at Evansville, resolved to be ready when Indiana makes its strike.

DOING ITS BIT: A 4,000-gal. gasoline truck and trailer capable of traveling at unusually high velocities and equipped with pumps which can deliver up to 400 gal. a minute was placed in use by the U. S. Army Air Corps this week. Fleets of these might solve the industry's inventory problem.

NECESSARY: Developments indicate that in near future gasoline pipe line distributing systems will be a necessary adjunct of most major refineries.



Drilling well in the shadow of the Pacific fleet at Long Beach, California



Proposed Standard of Indiana pipe line and other major gasoline systems. Heavy broken lines show projects under construction

Standard of Indiana to Build Gasoline Line to Iowa

By C. O. WILLSON

The Standard Oil Co. of Indiana, largest refiner and marketer of the Middle West, will shortly join the widening list of major companies which are utilizing pipe lines in the shipment of gasoline from refineries to distributing points. The company is now taking easements on the right of way extending from the company's refinery located at Sugar Creek (Kansas City), Mo., to Council Bluffs, Iowa, and has completed plans to lay a 180-mile 8-in. line with a capacity of 20,000 bbl. daily.

The inclusion of gasoline pipe lines in its facilities by the Standard of Indiana has been expected for some time, and those familiar with marketing conditions attach considerable importance to this latest development. It is believed that the Sugar Creek-Council Bluffs line will be followed by the installation of other lines connecting important consuming points to the company's refineries.

The Indiana Standard, it is pointed out, occupies a particularly strong position for profitable gasoline pipe line operation. The 10 middle western states in which it operates have approximately 30 per cent of the total gasoline consumption and the company is the largest distributor over a large part of that area. This density of gasoline consumption is one of the important factors in profitable gasoline pipe line operation.

The company has four refineries within this territory. The plants and their crude oil capacity are: Whiting, Ind., 112,100 bbl.; Wood River, Ill., 20,300 bbl.; Neodesha, Kans., 7,500 bbl.; Sugar Creek, Mo., 19,100 bbl. These plants are connected by a pipe line system of a subsidiary company which obtains the bulk of its crude oil supplies from Oklahoma, Kansas, and Wyoming.

Gasoline pipe lines extending out from these refineries from 25 to 300 miles would include a large part of the area served by the company's marketing territory. In addition, the company has several large water terminals on Lakes Michigan, Superior, and Huron, served by the Whiting refinery.

The company also has a 12,600-bbl. refinery at Casper, Wyo., and a 4,000-bbl. plant at Greybull, Wyo. These two refineries, along with that of the Utah Oil Refining Co., a subsidiary at Salt Lake City, Utah, serve the company's widely scattered Rocky Mountain distribution and the western edge of the middle western area.

Other refining companies operated by the company through subsidiaries include Stanolind Oil & Gas Co., Superior, La., 4,500 bbl.; Pan American Petroleum Corp., Destrahan, La., 10,000 bbl.; Pan American Refining Corp., Texas City, Tex., 79,000 bbl. These plants have no direct connection with the operations of the parent company in the Middle West. The Pan American company is a large distributor in the eastern part of the United States and uses the pipe line facilities of the Keystone Pipe Line Co. in the movement of gasoline inland from a Philadelphia terminal.

Market students feel that the Standard company's action is an additional reflection of the increasingly keen competitive situation in the Middle West. They also believe that the advent of the company in gasoline pipe line transportation will bring about further realignments in transportation facilities which will result in additional major companies using pipe lines in the movement of refinery products.

Observers stress that the growth of gasoline pipe lines is gradually nullifying the market significance which formerly attached to rail rates, when the railroads transported practically all of the products from refineries or water terminals. The Standard of Indiana had established gasoline tank-wagon and service station schedules in the Middle West, taking into consideration rail rates from its refineries to distributing points. Its principal competition came from the Mid-Continent group of refineries. This explained the general practice of basing tankcar sales on Oklahoma (Group 3) prices.

Construction of the Great Lakes pipe line (see map) by a group of Oklahoma and Kansas com-

panies and that of the Phillips company connecting to a refinery located in the Texas Panhandle, in the early thirties followed more recently by new lines within the Middle West, has gradually brought changes in this marketing situation based on rail rates. The practice of selling on a Group 3 basis continues although the general importance of this market has continued to decline steadily.

The tendency of the gasoline pipe line operators has been to establish lower delivered prices at points that can be conveniently served from terminals on several lines. Thus the present gasoline price picture in relation to refinery shipping points in the Mid-Continent and Middle West is substantially different from what it was a few years ago.

This development has been particularly important to the Standard of Indiana and other major companies distributing products in the Middle West from refineries located within that area. It has meant that the companies have lost a large part of the transportation advantage which they had before the entry of gasoline pipe lines. The narrowing spreads covering refinery and marketing operations has tended to emphasize the importance of this situation.

The number of gasoline pipe line projects now under way (see map) supports the contention of those who have predicted from the time the first line was constructed that this method of transportation would be attractive profitwise and gradually expand at inland points. So far there have been no failures in any of the projects, which have varied widely in operation setups and which collectively now transport a substantially part of the total gasoline production of domestic refineries.

The first lines were designed to transport large volumes of gasoline over long distances between refineries and bulk terminals. These projects included the lines connecting Mid-Continent refineries and some of the larger cities to the north and east. The first lines in the East were based on the same principle. Later, shorter lines, some of which are hardly more than elongated refinery loading racks, have proved attractive where large consumptive outlets are available within a small area. The Standard Oil Co. of Ohio has developed this method of operation more than any other company. The company operates three comparatively short pipe line systems extending from refineries in Ohio and Latonia, Ky.

It is believed that the trend toward the use of gasoline pipe lines will gain additional momentum over the next few years to the point where all the principal inland gasoline consuming centers in the United States will be connected to one or more gasoline lines. Some have visioned gasoline distribution comparable to the present natural gas systems, in which there would be numerous short distributing lines connected to trunk lines covering the entire country.

Railroad Use Is Increasing the Demand for Diesel Fuel

NEW YORK, July 3.—American railroads can be credited with a high percentage of the increasing demand for Diesel engine fuel starting in 1936 and continuing even at a higher rate for the first few months of this year.

Out of 105 locomotives delivered by the principal United States manufacturing plants during the first 5 months of this year 89 have been Diesel-electric power plants or 84.7 per cent of the total. This year's percentage of Diesel-electric units to total locomotive shipments compares to a little more than 31 per cent for the same period in 1938 and with a little less than 24 per cent in the first 5 months of 1937. Steam locomotive shipments outnumbered Diesel-electric units almost two to one from January to May 1938, and by more than three to one for the same 1937 period. At the end of May, according to statistical data released by William L. Austin, Bureau of the Census, there were 72 Diesel-electric locomotives on unfilled order, including 2 steam-electric units, against 15 for the same time in 1938 and 35 at the end of May 1937.

Going behind the figures it is interesting to examine a review presented recently by A. R. Walker, electrical engineer for equipment of the Illinois Central system. Mr. Walker's review was presented under the title of "The Role of the Diesel on Railroads," before the World Automotive Congress technical sessions in San Francisco, sponsored by the Society of Automotive Engineers.

One outstanding point made by Mr. Walker was that a 4-year record of the difference in operating costs between Diesel and steam power on one terminal showed the former type of locomotive unit averaged $1.85 per hour superior economy.

Through the end of April the domestic demand for gas oil and distillate fuels was reported by the Bureau of Mines at 51,790,000 bbl., an increase of 9,210,000 bbl., compared to 42,580,000 bbl. demand for the same period in 1938. The increase in light fuel oil consumption this year amounts to about 21.5 per cent. It would be improper to imply that greater use of Diesel locomotives by the American railroads accounts for all or even more than a substantial part of the increased domestic demand for light fuel oils, but the fact remains that there have been approximately 300 Diesel switching locomotives sold in this country since 1936 and each of them operates probably in the neighborhood of 7,000 hours per year. Diesel engines entered the railway picture with many handicaps but this method of power has firmly established itself because of its economic features. Diesel engines in the main line service may be operated hundreds of thousands of miles per year.

Five-Year Progress Shown

Diesel switching horsepower in operation by American railways increased from 4,500 in 1923 to more than 288,000 in 1938, an increase of 6,300 per cent.

Mr. Walker gave a table showing the number of streamlined trains placed in service each year from 1934 through 1938, the total horsepower of the units and average horsepower per unit, which follows:

Year—	No. of units	Total hp.	Av. hp. per locomotive
1934	1	600	600
1935	11	11,120	1,010
1936	7	15,300	2,185
1937	10	24,060	2,406
1938	15	54,000	3,600

In the first break-down attempted by the Bureau of Mines of Diesel fuel oil consumption by industries covering 1937, A. T. Coumbe reports that direct consumption by railroads during that year totaled 610,000 bbl. Total Diesel fuel oil sales in 1937 were 22,204,000 bbl., compared to 17,229,000 bbl. in 1936. By far the largest industrial consumer of Diesel fuel oil are the operators of marine equipment. Consumption by the marine trade during 1937 totaled 13,494,000 bbl.

In view of the increase in Diesel equipment operated by railroads during 1938 consumption in that year probably approached the mark of 1,000,000 bbl. and at the rate at which Diesel-powered locomotives are being added this year another substantial increase in consumption will result.

The average consumption by a 600-hp. Diesel switching locomotive is between 4 and 7 gal. per hour, depending on the type of service and loads moved.

In main line passenger train service the consumption will approximate 50 gal. per hour per 600-hp. unit. In other words some of the modern passenger locomotives equipped with Diesel engines with combined horsepower of 3,600 will consume up to 300 gal. per hour.

Close spacing in Kilgore area of East Texas field

Concerted Action Expected on East Texas Reallocation

By NEIL WILLIAMS

HOUSTON, Tex., July 3.—A concerted move on the part of various major companies to bring to a head the question of a proposed reallocation of allowable production in the East Texas field appeared probable as an aftermath of the federal court action upholding Rowan & Nichols in their suit for increased production from wells on their 24-acre Todd lease in that field.

What the move will be remained a matter of conjecture, but it was definitely stated by representatives of companies concerned that serious consideration was being given to various courses of procedure, and that something would be done in the near future. It was intimated court action might be taken, but only as a last resort.

These suggestions brought emphatic statements from Col. E. O. Thompson, member of the Railroad Commission, that so far as the Railroad Commission is concerned there will be no change in the proration setup in East Texas for at least 90 days from July 1, the period for which the current proration order was written.

Meanwhile, under protection of the injunction granted by Judge R. L. McMillan, in the Western Texas U. S. District Court, enjoining the Railroad Commission from restricting the production by Rowan & Nichols of the five wells on their Todd lease, those operators are permitted to produce up to 44 bbl. per well, the limit set by the court.

A new angle was injected into the situation by Colonel Thompson when he intimated there might be a question over the ability of Rowan & Nichols to move any oil produced in excess of the 22 bbl. per well to which production they would have been restricted under the proration schedule in effect in that field.

Under the Connally Act, Colonel Thompson pointed out, no oil produced in excess of the allowable set by authorized regulatory bodies of the respective states can be transported in interstate movement. Judge McMillan, in his decision in connection with the injunction granted Rowan & Nichols, did not pass upon the validity of existing proration orders, he said, and as the Railroad Commission in its current order had granted no increased allowables, any extra oil in excess of those allowables is being produced only under protection of the court and not under the allowable order. The injunction, he claimed, enjoined the commission only from interfering with the extra production.

Application of Rowan & Nichols to move 5,060 bbl. of oil during July is now in the hands of Federal Tender Board No. 1 at Kilgore, with decision on tenders scheduled to be made July 5. Decision was postponed from Saturday pending filing of certified copies of the federal court decree and the Railroad Commission proration order by attorneys for the operators.

Petitions of five major companies for increased allowables for their respective wells were disregarded in the current proration order for the field, the companies considering this tantamount to refusal of the increase. The petitions were filed on the strength of the decision in the Rowan & Nichols case, with the companies claiming they were entitled to the same proportionate production as that granted Rowan & Nichols by Judge McMillan. Petitioning companies control approximately 80 per cent of the field.

In a statement to the writer, Colonel Thompson said the Railroad Commission had no intention of granting any increases in allowables, and would make no move which might disturb the present status of the field pending final decision of the case, which has been appealed to the U. S. Circuit Court of Appeals, with hearing set for October 2 at Atlanta, Ga. If that court should uphold the lower court, the case will be appealed to the U. S. Supreme Court, he said, which assures the continuation of the present proration program in the field for some time, unless, he said, the commission later should see fit to make changes.

While it is possible for other companies to seek relief in court the same as Rowan & Nichols, Colonel Thompson questioned whether this would help them any time soon. He said the Rowan & Nichols case had been in court for some time and that it would be unlikely the other cases would be disposed of more quickly as each would have to be decided on its merits, as the Rowan & Nichols case involved a particular condition in which these operators' Todd lease was offset by a well on a fractional acre tract.

Colonel Thompson also emphatically declared the Railroad Commission would not call a special proration hearing as proposed unofficially by several oil company representatives, to take up the matter of a reallocation of allowables. With the present order written for a 90-day period and with no changes in the basis of proration desired by the commission, there would be no occasion for such a hearing, he said.

Making light of the anxiety so many have over the situation, he brought out that only a little over 100 bbl. is involved in the case, which is but

(Continued on Page 14)

Low Cost Drilling for Michigan Operators

This is the second of a series of two articles that discuss the present petroleum situation in Michigan. The first article was published in last week's issue.

By HARRY F. SIMONS

To date the producing horizons in Michigan are not numerous and the great bulk of the production is from lime formations. The Trenton lime (Ordovician) produces in the southeastern part of the state and some production has been obtained from the Guelph dolomite in the top of the Niagaran (Silurian) in that area. The Sylvania sand at the base of Devonian has been the source of a small quantity of oil.

The Detroit River (upper Monroe) just above the Sylvania, is an important source of petroleum, the production from the Van Horn (Clare County) and Crystal field (Montcalm County) being partially from this formation. The Dundee lime, the next youngest member stratigraphically, is to date the most prominent and widespread producing formation in the state. It is overlaid by the Traverse which is likewise widespread and is coming into more importance because of the development in the southwestern part of the state. These formations all belong to the Devonian.

The Berea sand, above the Antrim and the Ellsworth shales and the Bedford lime at the base of the Mississippian, is productive in the Saginaw and Birch Run fields and is an important source of gas in the Muskegon and Ravenna fields. At the base of the Michigan formation is a lenticular sand called the "Michigan stray" which accounts for most of the gas production in the state; it is the source of the gas in the Shaver field, in Gratiot County, Clare and Clare City in Clare County, Vernon and Broomfield fields in Isabella County, the Austin field in Mecosta County and the Six Lakes field in Mecosta and Montcalm counties. It underlies the Bayport lime at the top of the Mississippian.

The characteristics of the Michigan fields are determined to a great extent by the conditions prevailing during time of deposition of reservoir rock. During Devonian time the Michigan sea was at times quite shallow and huge coral reefs were formed; in some cases these reefs have been the source of production. The Traverse varies in thickness from 220 feet to 400 feet and there is some evidence that folding took place during deposition. It is divided into five zones in the western part of the state and consists of a succession of dolomite, limestone and chert with the lower part containing dolomitic chert, siliceous coral fragments and some argillaceous limestone. There are five separate pay sections with three of them occurring in the upper zone; all of the pay sections are not present in all wells and good producers are often obtained from a single pay horizon less than 10 feet thick.

The thickness of the Dundee is also highly variable and its top is often difficult to determine, the main indication being a reduction in the insoluble matter in the well samples. It is often dolomitic but is generally a finely crystalline light buff to brown limestone. The upper Monroe of Detroit River formation is mostly dolomite varying from light buff or gray to brown. It also contains some white and light blue anhydrite. Both the Dundee and upper Monroe contain several different pay horizons. Many of the limestones have been changed to dolomites during geologic time.

Because it is mostly limestone and dolomite production, determination of the extent of Michigan field structures is often difficult due to many things that can cause a dry hole in what looks like productive territory. Local conditions prevailing during the time of deposition may cause a failure which appears to be the field boundary but subsequent drilling sometimes proves production beyond these limits. There have also been some prolific producers offsetting light wells and often a very poor well is entirely surrounded by good wells.

The porosity of the producing formations is highly variable and is reflected by the recovery per acre which varies from 1,000 bbls. to as high as 7,500 bbls. Production curves generally show a rapid decline during the first four months. The curve generally flattens after the initial flush has been taken from a pool and the production may then decline gradually over a period of 10 years. Some fields show little evidence of water drive and rather rapid decline of the gas pressure, making the recovery during the later years difficult. There are several recy-

KEY FOR REFINERIES AND GASOLINE PLANTS ON MICHIGAN MAP

REFINERIES

1. Acme Refining Co., Alma.
2. Apex Gas, Inc., Porter Twp., Midland County.
3. Aurora Gasoline Co., Detroit.
4. Aurora Gasoline Co., Elsie.
5. Blair Oil Company Refinery, Grand Lodge.
5. Blair Oil Company Refinery, Grand Ledge.
6. Bay City Refining Co., Bay City.
7. Crystal Refining Co., Carson City.
8. Hanners Oil Co., Elsie.
9. Hi-Way Refining Co., 3 miles north Rosebush.
10. Imperial Refining Co., Grand Rapids.
11. Inter-Lakes Refining Co., Trenton.
12. Kent Refining Co., Grand Rapids.
13. Leonard Refining Co., Alma.
14. Leonard Refineries, Inc., St. Louis.
15. Lube Oil Corp., Alma.*
16. McClanahan Refineries, Inc., St. Louis.
17. Midwest Refineries, Inc., Alma.
18. Naph-Sol Refining Co., Muskegon.
19. Northern Refineries, Inc., Alma.
20. Old Dutch Refining Co., Muskegon.
21. Peerless Oil Co., Saginaw.
22. Producers Refineries, Inc., West Branch.
23. The Pure Oil Co., Midland.
24. Roosevelt Oil Co., Mount Pleasant.
25. Socony-Vacuum Oil Co., Inc., Trenton.
26. State Refining Co., Grand Rapids.
27. W. J. Sovereign, Saginaw.
28. Sweet Oil Refining Co., Wyman.
29. Lake State Oil Co., Bloomingdale.

* Plant leased to Trumbull Asphalt & Refining Co., Chicago, Ill.

GASOLINE PLANTS

OWNER	LOCATION	TYPE	CAP.
Grimes, O. M.,	Mount Pleasant	C—A	10,000
Grimes, O. M.,	Yost	C—A	7,500
Grimes, O. M.,	Sherman	C—A	5,000

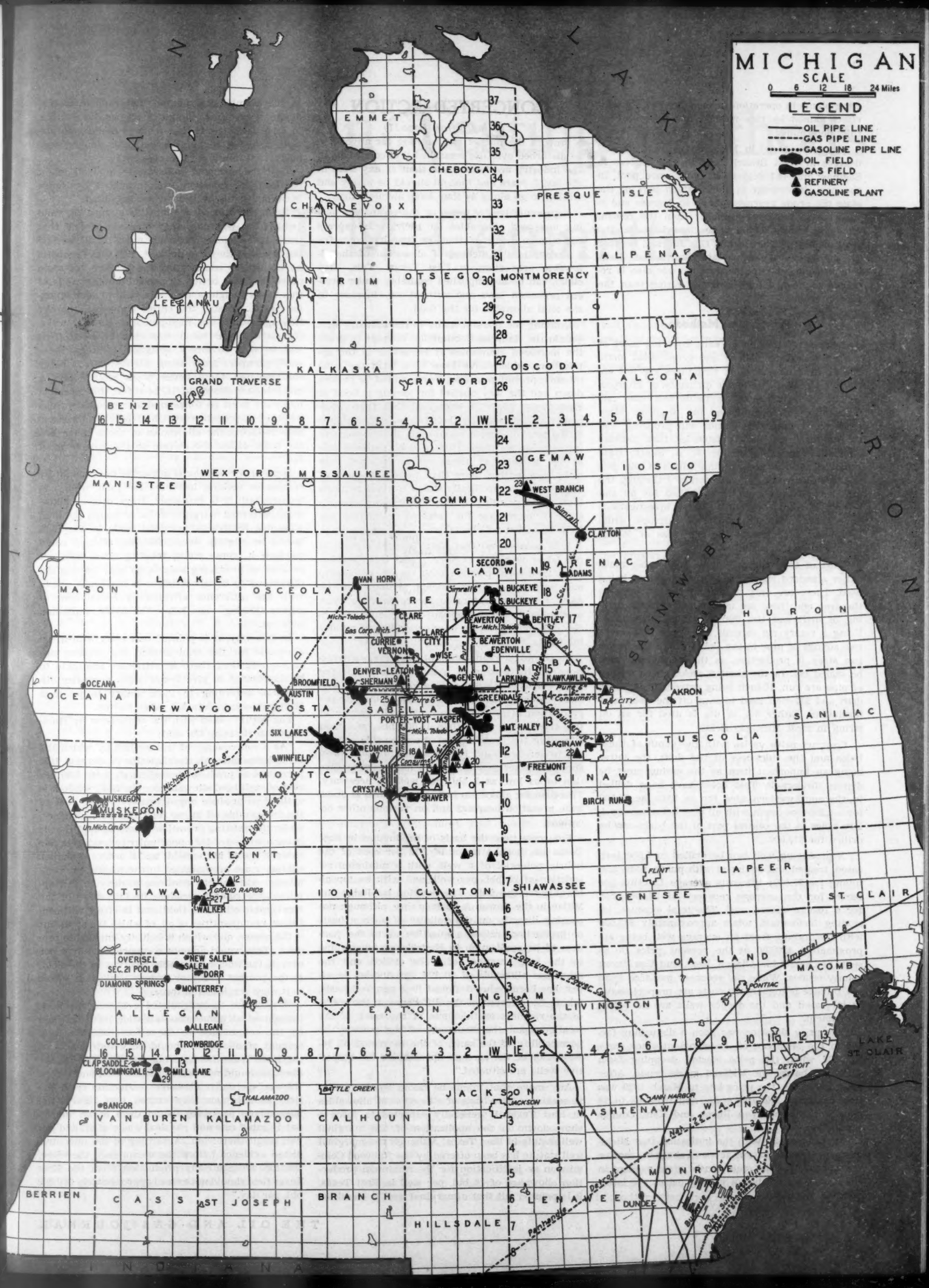
MICHIGAN OIL FIELDS

Name—	Location (twp. and rg.)	Producing formation	Depth
Adams	19n- 3e	Traverse	2,000
		Dundee	2,800
Akron	14n- 7e	Detroit River	2,975-3,000
Allegan	2n-13w	Traverse	1,510
Bangor	2s-16w	Traverse	925-975
Beaverton-S. Beaverton	17n- 2w	Dundee	3,800-3,850
Bentley	17n- 2e	Dundee	3,400-3,450
Birch Run	10n- 6e	Berea	1,500-1,550
Bloomingdale	1s-14w	Traverse	1,185-1,235
N. Buckeye-S. Buckeye	18n- 1w	Traverse	2,900-2,950
		Dundee	3,550-3,600
Clapsaddle	1s-15w	Traverse	1,185
Columbia	1s-14 and 15w	Traverse	1,160-1,185
Crystal	10 and 11n-5w	Dundee-Monroe	3,175-3,180
Currie	16n- 4w	Dundee	3,900-3,925
Clayton*	20n- 4e	Dundee	2,550-2,600
Denver-Leaton	15n-3 and 4w	Dundee	3,575-3,650
Diamond Springs	3 and 4n-13 and 14w	Traverse	1,460
Dorr	4n-12w	Traverse	1,560
Edenville	16n- 1w	Dundee	3,725-3,750
Fremont	11n- 2e	Berea	2,120-2,130
		Dunee	3,150
Oceana	15n-17w	Traverse	1,850-1,870
Kawkawlin	14 and 15n-4e	Dundee	2,700-2,750
Larkin	15n- 2e	Berea	2,400-2,425
Mill Lake	1s-14w	Traverse	1,280
Monterrey	3n-13w	Traverse	1,635-1,660
Mount Haley	13n- 1e	Dundee	3,450
Greendale	14 and 15n-2 and 3w	Dundee	3,500-3,600
Muskegon*	10n-16 and 17w	Traverse	1,575-1,670
		Dundee	2,000-2,050
		Monroe	2,200-2,250
Porter-Yost-Jasper	13 and 14n-1 and 2w	Traverse	2,800-2,850
		Dundee	3,375-3,425
Salem-New Salem	4n-13w	Traverse	1,560
		Traverse	1,610
Saginaw	12n- 4e	Berea	1,800-1,850
Section 21	4n-14w	Traverse	1,460-1,470
Secord	19n-1e	Dundee	3,350
Sherman	15n- 6w	Dundee-Monroe	3,625-3,675
Trowbridge	1n-13w	Traverse	1,360
Van Horn*	18 and 19n-6w	Dundee-U. Monroe	3,895-3,925
Vernon	16n- 4w	Dundee	3,700-3,725
Walker	6 and 7n-12w	Traverse	1,850-1,875
West Branch	21 and 22n-1, 2, and 3e	Traverse	1,700-1,800
		Dundee	2,550-2,600

*Also gas in shallow formations.

GAS

Austin	14 and 15n-9w	Michigan stray	1,330-1.350
Broomfield	14 and 15n-6w	Michigan stray	1,375-1,425
Clare	17 and 18n-4 and 5w	Michigan stray	1,400-1,425
Clare City	17n- 4w	Michigan stray	1,275-1,300
Ravenna	9 and 10n-14 and 15w	Berea	1,140-1,175
6 Lakes	12 and 13n-7 and 8w	Michigan stray	1,275-1,325
Shaver	10n- 4w	Michigan stray	950-1,000
Vernon	16n- 4w	Michigan stray	1,275-1,375


MICHIGAN
SCALE
0 6 12 18 24 Miles
LEGEND
OIL PIPE LINE
GAS PIPE LINE
GASOLINE PIPE LINE
OIL FIELD
GAS FIELD
REFINERY
GASOLINE PLANT
LAKE MICHIGAN
LAKE HURON
SAGINAW BAY
LAKE ST. CLAIR
EMMET
CHEBOYGAN
PRESQUE ISLE
CHARLEVOIX
ALPENA
ANTRIM
OTSEGO
MONTMORENCY
LEELANAU
KALKASKA
OSCODA
ALCONA
GRAND TRAVERSE
CRAWFORD
BENZIE
OGEMAW
IOSCO
WEXFORD
MISSAUKEE
MANISTEE
ROSCOMMON
WEST BRANCH
CLAYTON
SECORD
ADAMS
GLADWIN
ARENAC
LAKE
MASON
OSCEOLA
CLARE
HURON
VAN HORN
N. BUCKEYE
S. BUCKEYE
BEAVERTON
BENTLEY
CLARE
CLARE CITY
CURRIE
VERNON
WISE
S. BEAVERTON
EDENVILLE
MIDLAND
BAY
OCEANA
DENVER-LEATON
SHERMAN
BROOMFIELD
AUSTIN
GENEVA
LARKIN
KAWKAWLIN
BAY CITY
AKRON
NEWAYGO
MECOSTA
ISABELLA
GREENDALE
PORTER-YOST-JASPER
SANILAC
MT. HALEY
SAGINAW
TUSCOLA
SIX LAKES
EDMORE
WINFIELD
FREEMONT
MONTCALM
GRATIOT
SAGINAW
CRYSTAL
SHAVER
BIRCH RUN
MUSKEGON
KENT
FLINT
LAPEER
OTTAWA
IONIA
CLINTON
SHIAWASSEE
GENESEE
ST. CLAIR
GRAND RAPIDS
WALKER
OVERISEL
SEC. 21 POOL
NEW SALEM
SALEM
DORR
DIAMOND SPRINGS
MONTERREY
OAKLAND
MACOMB
PONTIAC
BARRY
EATON
INGHAM
LIVINGSTON
ALLEGAN
ALLEGAN
COLUMBIA
TROWBRIDGE
CLAPSADDLE
BLOOMINGDALE
MILL LAKE
DETROIT
BATTLE CREEK
JACKSON
ANN HARBOR
WASHTENAW
KALAMAZOO
BANGOR
VAN BUREN
CALHOUN
MONROE
BERRIEN
CASS
ST JOSEPH
BRANCH
LENAWEE
DUNDEE
HILLSDALE
INDIANA
Michigan P.L. Co. 8"
Mich. Light & Pr. Co. 8"
Un. Mich. Con. 6"
Mich-Toledo Gas Corp. Mich. 12"
Mich-Toledo 8"
Simmalls 6"
Simmalls 8"
Pure 6"
Pure 8"
Ar. Consumers 8"
Gas Corp. Mich. 8"
Consumers Power Co.
Imperial P.L. 8"
Pure 10"
Pure 12"
Transferred
Consumers Power Co.
Detroit
Petroleum
Buckeye
Pure 8"
Pure 10"

cling plants in operation in the state but the total effect gained by this method has not yet been fully determined.

Crude produced in Michigan varies from 32.7 degrees in West Branch field to 44.3 degrees in Saginaw and 44.1 degrees in the Vernon pool. In the new discoveries in the western part of the state the crude averages above 40 degrees and is reported to be more asphaltic than the central Michigan crudes which were classed by the Bureau of Mines (The Oil and Gas Journal, October 21, 1937, Page 77) as paraffin-intermediate base, wax bearing; the southwestern crude also is reported to have a higher octane rating than the central crudes.

Prospecting Methods

Because of the glacial drift covering most of the state, surface geology and geophysical methods of locating favorable structures are not entirely successful due to the difficulty of interpretation; the presence of magnetite and other metallic ores also complicates the problem. More work along geophysical lines will probably lead to the discovery of consistencies that indicate anomalies, according to Dr. R. A. Smith, state geologist. At the present time much of the geological information is being obtained through the samples obtained from wells drilled for oil and brine and from core holes. These investigations have shown that the studies of outcrops, while useful, do not indicate the thickness of formations within the basin.

Most of the drilling is done with cable tools, either standard rigs or spudding machines being used. There are only a few rotaries at work in the area and these are used mostly for the drilling of drift and the Pennsylvanian formations. Using a rotary rig to drill the upper hole saves two strings of pipe in the fields where the Michigan stray is productive, as this formation must be sealed off. In the shallow fields three strings of pipe are run, 10-inch being driven through the drift and 8¼-inch used to shut off the Coldwater formation. Either 5$\frac{3}{16}$ or 6⅝ is used for an oil string in most Michigan fields.

Contract price varies with the depth of these holes and the thickness of the drift, the latter being an important item as the casing must be driven through it. Test holes have been drilled in the southwestern area for as little as $1,500 for a 1,200-foot depth with all pipe being salvaged. Dry holes in the central part of the basin can be drilled for $12,000.

A producing well can be drilled to 1,550 feet, cased, treated and equipped with pump, rods, and tubing for $7,500; lift costs average 15 cents per barrel for the average recovery of 27,000 bbls. for a 10-acre spaced well. The total expense, including incidentals, totals approximately $13,500 with the income from an average well being approximately $20,500 at the present price of 88 cents per barrel for Allegan, Kent, and Van Buren county crudes. While the recovery per acre from the Dundee is higher, the costs are proportionately increased and the deeper wells are no better investment.

The price situation has been a disturbing factor in the Michigan oil development since early in 1937 when the price started dropping from $1.42 per barrel for Midland grade crude. After successive cuts, the price late in March 1939 was 92½ cents for Midland grade and from 68 to 78 cents for Allegan, Van Buren and Kent County production.

Simultaneously with the indication that Michigan's new conservation act was about to receive the approval of the state senate after passage in the house, buyers began raising prices the latter part of April.

CONCERTED ACTION

(Continued from Page 11)

a drop in the bucket and nothing for anyone to be disturbed over. He remarked that conditions in the industry are better now than at any time in the last 5 years and that all should be happy and willing to go along as they have awhile longer.

Representatives of some of the companies asking increased allowables for their wells express the opinion, however, that the time has come for a change in the method of allocation of the allowable production in East Texas. This, they claim, can be accomplished equitably under present proration laws and without any increase in the total allowable for the field.

Quieting the fears of many in the industry that should the Railroad Commission attempt to grant the increased allowables as requested in the applications which have been filed wtih the commission, proration in East Texas would be broken down and the way opened for loosing a flood of East Texas oil, it is explained that these companies are asking only their proportionate shares of the total allowable based upon their respective interests in the field. This is to be realized only at the expense of those operators who, they claim, are getting more than their due share of the total. It is specifically stated in their requests that if the granting of the higher allowables results in increasing the total allowable for the field no action will be taken.

It is pointed out that East Texas operators in this latest development have to take into consideration their legal position with royalty ownership and partnership arrangements. Failure on the part of lease operators to secure the maximum production to which they are legally entitled conceivably could result in later action by the royalty interests.

Proposals for reallocation of East Texas production call for setting of a top allowable for the field consistent with prevention of waste and market demand as required by law, deducting the production of so-called marginal wells, which at this time is not more than 10,000 bbl., and then allocating the remainder of the allowable according to acreage, sand thickness, bottom-hole pressure and other factors, with a minimum production of as low as 5 bbl. per well, if necessary. This plan for allocation has been outlined at statewide proration hearings and on various other occasions.

For some time the basis of production in East Texas has been a factor of 2.32 per cent of the hourly potential of a well, with a minimum restriction of 20 bbl. per well, and with no top allowable for the field. The decision by Judge McMillan in the Rowan & Nichols case, although not passing directly on the validity of such a basis of production, raised a question as to the justness of its application in East Texas, where, due to the large number of wells drilled and the minimum allowable of 20 bbl., production in effect has been reduced almost to a per well basis, taking "no account of the difference in the wells, of the richness or thickness of the sand, of the location upon the structure, of the porosity or permeability of the sand, of the estimated oil reserves, or of the acreage upon which the respective wells are situated."

Any move that might be taken by companies in seeking a new basis of allocation of allowables in East Texas is generally expected to force a show down on the application of the marginal well statute in East Texas. Although the marginal well statute has been offered by the Railroad Commission as justification for the minimum production allowance of 20 bbl. per well in East Texas, it is pointed out that a marginal well is classified in the statute as a pumper not capable of producing a specified amount of oil per day (20 bbl. in East Texas), and that there is nothing to prevent reducing the production of a flowing well below that minimum if necessary.

That the marginal well statute in itself might be open for question was intimated by Judge McMillan in his decision when he stated:

"If it be conceded that the statute is valid (which has been seriously questioned) and that these strictly marginal wells must be allowed 20 bbl. a day if they can make it, still that furnishes no excuse for confiscating the property of some other producer better situated. Pumping wells of this variety might appear in a field to such an extent as to exhaust the entire allowable, thereby leaving nothing for high-potential flowing wells. No such absurd result was ever intended. This statute was obviously designed to keep these small pumpers from being slighted off, it being contemplated these better wells would have a much higher allowable. If, however, this marginal minimum must be considered as a component element of a proration scheme, thereby unreasonably reducing the allowables of those other better wells, either the statute or the scheme must fail."

Some of the additional allowable now sought by companies seeking increases for their wells can be obtained, it is explained, from present allowables permitted marginal wells. Although the total allowable of strictly marginal wells in the field would be slightly over 9,000 bbl. if they could produce it, these wells, totaling about 450, are capable of producing only 5,250 bbl., leaving the difference to be allocated to better wells, along with the difference effected by curtailment of poorer flowing wells below the 20-bbl. minimum now set.

In this way, it is pointed out, even with a top allowable for the field around the present current production, there is sufficient allowable to be distributed to give better wells a greater differential according to their ability to produce, taking into consideration other factors.

The petition filed with the commision by Humble Oil & Refining Co. said:

"As a consequence of the method by which the commission allocates the allowable production, it is permitted to produce approximately only 9.99 per cent of such total allowable for the field, while it is entitled to produce approximately 14 per cent of the recoverable oil in the field. As a consequence, under the existing proration order the applicant is being deprived of the opportunity to produce a fair share of the oil in the field; and if orders of similar character are promulgated in the future, the commission will thereby continue to deny to this applicant the right to produce its fair share of the recoverable oil in the field, and in effect will confiscate vast quantities of oil, of which the applicant is the owner, and which it is justly entitled to produce. This would amount to approximately 4 per cent of the total recoverable reserves in the field, if the present order or orders similar in effect to it were continued in force.

"Heretofore uncontradicted evidence has been introduced at numerous state-wide hearings held by the commission to the effect that the total amount of oil which should be withdrawn from the East Texas field during any one day on the average should not exceed 380,000 bbl., and that if the average daily allowable production from the field should materially exceed that figure, the bottom-hole pressures would drop at an inordinately rapid rate and physical waste of oil and gas will result therefrom. According to the uncontradicted evidence before the commision, therefore, the top average daily production from the East Texas field should not exceed approximately 380,000 bbl. per day."

Revisions in Testing Methods by A.S.T.M. Committee D-2

ATLANTIC CITY, N. J., June 30.—Recommendation that three tentative tests be advanced to standard and that three new tentative procedures be published was made by Committee D-2 of the American Society for Testing Materials at the annual meeting of the society held here this week.

The committee recommended advancement from tentative to standard the viscosity temperature chart for liquid petroleum products (D341-37T); the method of converting kinematic viscosity to Saybolt Universal seconds (D446-37T) and the definitions of terms related to petroleum (D288-36T). Final decision to publish the three tests as standard will be determined by a mail ballot but there was no objection at the meeting.

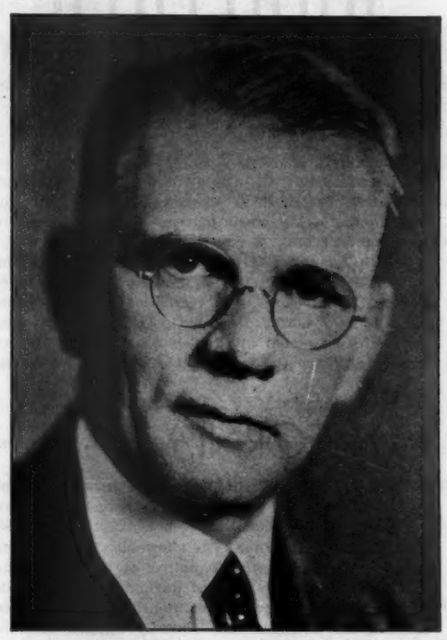
E. W. Dean, Standard Oil Development Co., New York, was honored at the annual dinner for Committee D-2 members held in Atlantic City June 27. Dr. J. B. Rather, New York, Socony-Vacuum Oil Co.'s director of research, was toastmaster at the dinner. Dr. T. G. Delbridge, director of the research department of Atlantic Refining Co. and retiring president of the A.S.T.M., and K. G. Mackenzie, technical assistant to the president of the Texas Co. and past president of the A.S.T.M., attended the dinner. Dr. Dean was subjected to considerable "ribbing" over opinions expressed many years ago when he was connected with the Bureau of Mines. He was presented with a matched set of golf clubs in recognition of services to the society.

In his presidential address Dr. Delbridge said: "Some idea as to how long our petroleum reserves are likely to last is our next glimpse at petroleum—and in this case the word 'glimpse' is peculiarly appropriate. If you must have an answer to the question 'How long?' perhaps 150 years is none too high. Therefore, if any of you have sons or grandsons or daughters or great-granddaughters who want to enter the petroleum industry, it probably offers a more permanent outlet for hard work and keen competition than almost any business other than food and politics."

The committee discussed certain changes in fuel oil specifications but action was deferred for consideration of the problem. There is a probability that the viscosity range of No. 3 fuel oil will be lowered to meet new developments in the matter of coding or classifying oil burners. The change probably will be on the high side leaving the minimum unchanged.

Recommendation has been made that the Institute of Petroleum of Great Britain's Ramsbottom test for determining the carbon residue of petroleum products replace the Conradson carbon residue test. A series of tests was reported to show better reproducibility by the Ramsbottom method by L. C. Beard, Jr., Socony-Vacuum Oil Co., Inc. Technical Committee A on gasoline, headed by T. H. Rogers, Standard Oil Co. of Indiana, has developed a method for gum stability that is being recommended for publication as tentative.

Studies of methods to determine tetraethyl lead in gasoline have been made and the HCl reflux method was recommended for publication as tentative. The tentative method proposed involves conversion of tetraethyl lead to lead chloride by refluxing with hydrochloric acid, and the lead determined volumetrically by titration with ammonium molybdate or gravimetrically as the chromate or sulfate.



Dr. T. G. Delbridge, retiring president

Revisions of several tentative standards, mostly of minor nature, were recommended by the committee. These included slight changes in the tentative method of test for saponification number; the method of test for vapor pressure; tentative methods of test for kinematic viscosity; tentative methods of test for color of lubricating oils by means of A.S.T.M. union colorimeter; standard method of test for cloud and pourpoint; standard method of test for distillation of natural gasoline; standard method of test for sulfur in petroleum oils by bomb method; standard method of test for thermal value of fuel oil and the standard method of test for burning quality of kerosene oils.

The recommended change in the vapor pressure test was by Subcommittee 22 on natural gasoline and involves limiting the internal diameter of the connection between the air chamber and the pressure gage to not less than three-sixteenths of an inch.

Recommendation of the publication of a tentative specification for aviation gasolines presented simultaneously to Technical Committee A and Committee D-2 was included with Committee D-2's report for information only.

Committee D-2 recommended for immediate adoption, revisions in four standard methods of test, as indicated below, and they have been, or will be referred to the society by letter ballot:

Standard method of test for cloud and pourpoints (D 97-34)—The revision given below in the specification for the A.S.T.M. low cloud and pourpoint thermometer is recommended by Subcommittee 26 on cloud and pour test (L. C. Beard, Jr., chairman). In explanation of these changes, the subcommittee states that both cloud and pourpoint thermometers are calibrated for 4¼-in. immersion and are employed at approximately that immersion in making the cloud test. In making the pour test, the thermometer is raised so that the immersion is about 3 in.. which causes an error of about 5° F. at —30° F. in the low thermometer. The change in immersion of this thermometer increases its accuracy for use in determining pourpoints while sacrificing accuracy in determining cloud point, and is proposed because of the greater importance of the former. No change is recommended for the mercury thermometer used above —30° F. because of the small error resulting in variation of immersion of this type of thermometer.

Section 3(b), Table II.—Change the paragraph on immersion and standardization to read as follows by the addition of the italicized words and figures and the omission of those in brackets:

Immersion: [108 mm. (4¼ in.)] *76 mm. (3 in.)*. The words "[108] *76*-mm. immersion" on centigrade thermometers, or "[4½] *3*-in. immersion" on Fahrenheit thermometers, and a line around the stem [108 mm. (4.25 in.)] *76 mm. (3 in.)* above the bottom of the bulb, shall be etched on the thermometer.

Standardization: The thermometer shall be standardized at the ice point and at intervals of approximately 20° C. or 35° F. for [108] *76*-mm. or [4¼] *3*-in. immersion, and for an average temperature of 21° C. or 70° F. for the emergent liquid column.

Standard method of test for distillation of natural gasoline (D 216-32): The following addition is recommended by Subcommittee 22 on natural gasoline (G. G. Oberfell, chairman):

Section 5.—Add the following as a new paragraph:

The sum of the volume collected in the cylinder at any specified temperature and the distillation loss may be recorded as the percentage evaporated at the temperature in question.

Standard method of test for sulfur in petroleum oils by bomb method (D 129-34)—A revision of this method, involving a rearrangement and numerous changes of an editorial nature in the text, is recommended by Subcommittee 7 on sulfur determination (H. M. Hancock, chairman).

Standard method of test for thermal value of fuel oil (D 240-27)—A revision of this method, involving changes primarily of an editorial nature, is recommended by a special subcommittee.

TEXAS

NO CHANGES IN EAST TEXAS ALLOWABLES will be made at this time as a result of the federal court decision in the Rowan & Nichols case, Railroad Commissioner E. O. Thompson stated late last week. "We are not going to disturb the status quo because we want the courts to find the same conditions or facts to exist and decide whether constituted regulatory authority can have their orders displaced by a court."

He further stated that the Rowan & Nichols case (federal court decision given on Page 38, The Oil and Gas Journal, June 22) would be carried to the higher court. Pending that appeal, however, rules will not be changed as the commission does not want the appeals courts to dismiss the case as moot by reason of changes in the order. While this may result in further suits being filed along the lines of that of Rowan & Nichols, resulting in further exceptions being made in the East Texas field order, some observers feel that no further law suits are in prospect. However, should some royalty owner feel that he is being subjected to drainage, the operator would have but little choice.

Among facts brought out during the past week was that 63,570 productive acres of the East Texas field, or 62.48 per cent of the total field acreage, was owned by only 18 companies. Since there are approximately 1,050 individual operators in the field, this means that the remaining acreage is held by over 1,000 companies and firms. As compared with the adjusted allowable ruled by the federal court, these 18 operators are now losing 9.5 per cent of the total daily allowable. If these operators should gain this additional 9.5 per cent throughout the remainder of the field's life, they would gain approximately 237,000,000 bbl. of oil since one major company at a recent hearing placed the East Texas field reserve at 2,500,000,000 bbl.

HIGHER ALLOWABLES FOR TWO GULF COAST fields were ordered last week by the Railroad Commission. The allowable for the West Beaumont field, Jefferson County, was raised from 2,485 to 4,333 bbl. daily, effective July 1, or a maximum per-well allowable of 100 bbl. In the Cedar Point field, Chambers County, effective July 1, the total field allowable was increased from 1,037 to 3,005 bbl. daily. Thus the per-well allowable for this 6,040-ft. field was raised from 106 to 307 bbl. daily.

AT A FOUR-FIELD HEARING held last week on three Gulf Coast and one North Texas fields, operators asked for either 20- or 40-acre well spacing. At the hearing on the 11-well West Ranch pool of Jackson County, all operators approved a request for 20-acre spacing. In the Minnie Bock field of Nueces County operators also approved of a request for 20-acre spacing. There are now two wells in this field which was opened in May of this year.

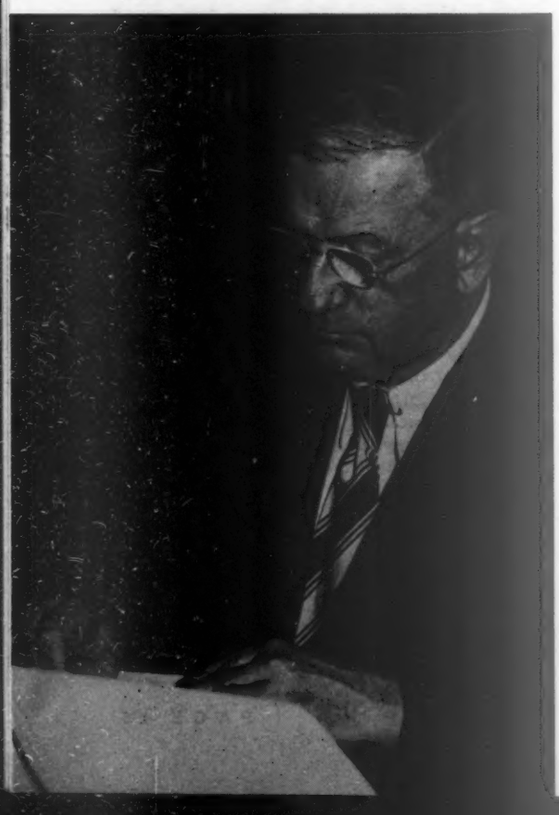
At a hearing on the new Cameron field of Starr County, Transwestern requested 20-acre spacing with the wells spaced in the center of oblong 20-acre units, 660 ft. apart in a north-south direction and 1,320 ft. apart east and west. This was suggested as a means of taking full advantage of the water drive expected in the field. Sun Oil Co. alone protested this plan, advocating one well to 40 acres, and pointing out that the east-west spacing pattern of the Transwestern plan was in reality 40-acre spacing.

British American Oil Co. requested 40-acre spacing for wells in the new deep Mankins field of Archer County, North Texas, the regulations to apply only to wells over 4,000 ft. deep. This field now has only one well, completed by British American in May of this year, in the Caddo lime at a depth of 4,664 ft.

STATE CAPITALS

CALIFORNIA

ALLOWABLE PRODUCTION OF CALIFORNIA for July has been fixed by the Central Committee of California Oil Producers at 595,000 bbl. daily as compared with 588,201 bbl. in June. The allowables for both June and July were set by the committee on the assumption that stocks would be reduced during the two periods and thus tend to alleviate conditions next winter when consumption declines. The recently applied uniform method of allotment has met with unanimous approval and since June 1 crude-oil production has been kept within bounds. Superior Judge Emmett H. Wilson issued an injunction last week against operators in the west end of the Montebello field which prohibits the blowing of gas into the air, and prorated the gas outlet of 23,000,000 cu. ft. daily among operators. The injunction will not entirely eliminate the blow into the air but will minimize the volume, as wells having high gas-oil ratios are obliged to reduce crude-oil production to not to exceed 250 bbl. per day each. When crude production is reduced to this amount, gas production will obviously follow the decline in crude-oil production. During the past several days, production of the field, both gas and crude oil, has been declining, due to conformance with provisions of the injunction. Indications point to the extension of activities of the Department of Natural Resources to include operators in the Rosecrans field unless conditions in that field are immediately improved.



HAROLD L. ICKES, secretary of the interior, commenting on the 3-year extension of the Connally law, said 72 per cent of the oil production in the United States is being produced under conservation laws. "When the California law becomes effective 90 per cent will be subject to conservation laws. Illinois, now ranking fifth in production and producing about 5 per cent of the national output, will remain as the only large oil-producing state which has not adopted legislation to conserve the oil and gas resources within its borders."

CONNALLY ACT

THE BILL TO EXTEND the Connally hot oil law for another 3 years was signed by President Roosevelt just in time to prevent the law from expiring on June 30. The Senate had voted to make the law permanent, but the House insisted on an extension for only 3 years, and this amendment was accepted by the Senate without debate.

"The extension of this law makes possible continued joint action of the federal Government and the principal oil-producing states in the conservation of the oil and gas resources of the United States," said Secretary Ickes.

"The Connally law supports the oil and gas conservation laws which have been enacted by seven states—Arkansas, Kansas, Louisiana, Michigan, New Mexico, Oklahoma, and Texas, which are now producing 72 per cent of the total petroleum output of the United States—by prohibiting the shipment in interstate or foreign commerce of petroleum and petroleum products produced in excess of the amounts permitted under these state laws. When the similar law which was enacted recently in California becomes effective, 90 per cent of the oil production of the United States will be subject to state conservation laws and the Connally law. Illinois, now ranking fifth in oil production and producing about 5 per cent of the national output, will remain as the only large oil-producing state which has not adopted legislation to conserve the oil and gas resources within its borders.

"This joint action of the state and federal governments is preventing waste and increasing the efficiency of oil production in the United States," Secretary Ickes said.

"By giving strong support to the state oil and gas conservation laws, the Connally law has made a substantial contribution to the conservation of the oil and gas resources of the nation, and the federal and state responsibilities in this respect have been coordinated without placing any undue burden upon the consumer of petroleum products. In fact, I am convinced that the consumer will continue to benefit if the policy announced in the Connally Act of making adequate supplies of oil available at reasonable prices is adopted as permanent legislation of the United States."

Secretary Ickes favors the permanent enactment of the law as soon as possible as a step toward the protection of the needs for oil for the national defense and for the general welfare.

ARKANSAS

JULY ALLOWABLE PRODUCTION IN ARKANSAS will remain the same as it was in June, 57,641 bbl. per day. On the last of June the Arkansas Oil and Gas Commission rescinded an order cutting Magnolia field wells in July from 300 bbl. a day per well to 200 bbl. a day per well, which order had been made June 22 because of lack of sufficient market. This condition was corrected before the close of the month, making it possible to maintain the 300-bbl. per well allowable in Magnolia in July.

OKLAHOMA

THE OKLAHOMA CORPORATION COMMISSION verbally granted an oil production allowable of 428,000 bbl. daily for July after Conservation Officer W. J. Armstrong pledged himself to keep the daily average output at that level.

It ended an uneasy 48 hours for Oklahoma producers who earlier in the week had been told by Mr. Armstrong that reductions of about 50,000 bbl. daily would have to be made.

The Conservation Department released its May production report showing 460,484 bbl. daily output, 32,484 bbl. in excess of the allowable.

At a morning conference on June 29, Mr. Armstrong warned that drastic reduction in production would be made in July and August so that the state could go through the year with an average of 428,000 bbl. daily.

Carter and Barnsdall Oil Co. representatives recommended cutting allowables to as low as 400,000 bbl.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Legal-Proof

The widespread discussion that has developed since the federal court decision in the Rowan & Nichols East Texas case is indicative of the fact that many close students of the industry fully appreciate its importance.

The tendency on the part of the uninformed has been to dismiss the decision as having no significance owing to the fact that it involves only 100 bbl. of crude oil daily and also because the decision has been appealed and presumably enforcement will not come until some distant date in the future.

Those who have made a careful study of the decision and were previously informed on the issues involved are inclined to take the view that it relates to factors that are fundamental, not only in East Texas but in the application of conservation and proration regulations everywhere.

The court said in this case that there had been obvious inequities in the application of proration in East Texas and that the complainant company was entitled to relief.

The court found, in effect, that the property rights of the operating company, guaranteed by the Constitution, had not been protected and issued an order for the necessary adjustment in allowable.

While not specifically passed upon in this decision it was apparent from comments made by the court that the whole theory of marginal well proration as enforced in East Texas may have a questionable legal status.

Looking at the matter from an operating standpoint, the court found that the company's sound position had been ignored and that it had been placed on the same proration basis as concerns whose operations have been carried on with little regard to conservation principles. The varying ability of leases to produce due to richness and size of producing horizons including the reserves yet to be produced, it was pointed out, have been ignored.

A regulation which places the operator of a town-lot well surrounded by wells of the same type on the same allowable basis as an operator who observes well-spacing requirements and other sound conservation regulations may be justified as a temporary expedient but it certainly has no place in a permanent conservation program.

Many things that have been done have been justified on the ground that nothing else could be done in the circumstances. It is true that conservation authorities have been called upon to apply regulations in fields and areas where the damage had already been done and where no regulations could be 100 per cent fair to everyone concerned.

Just what the final legal viewpoint in this situation will be remains to be seen. The same legal questions can be raised in other fields.

Even in this case, as indicated by Judge McMillan's decision, there is always the possibility that the courts will recognize the position of those who clearly are entitled to more than they are getting, with possibilities which conceivably may force a completely new approach to the problem.

The lesson here is that while the industry may "get by" with a hodgepodge of proration regulations, certainly it cannot expect that same judicial attitude to continue indefinitely in the future. Proration regulations applying to several areas need to be gone over and revised on a basis of the legal principles enunciated in the McMillan decision.

The entire development particularly emphasizes the necessity to control new field developments from the start to the end that they will be legal-proof.

Disney Introduces Amendment to Pipe-Line Tax Law

WASHINGTON, D. C., July 3.—To clarify the law relating to taxation of pipe lines in connection with refinery facilities Representative Wesley E. Disney of Oklahoma has introduced an amendment to Section 731 of the 1932 Revenue Act and Section 3460 of the Internal Revenue Code as follows:

" 'The tax imposed by this section shall not apply to any movement of less than 10 miles if such movement is:

" '1. Within a refinery or a bulk plant;

" '2. Between a refinery and another refinery, both operated by the person furnishing the transportation; or

" '3. Between a refinery and its loading or unloading facilities or a vehicle or vessel thereat, or between a bulk plant and its loading or unloading facilities or a vehicle or vessel thereat, if the refinery or bulk plant and the respective loading or unloading facilities are both operated by the person furnishing the transportation.

" 'When used in this subsection the terms "refinery," "bulk plant," and "loading or unloading facilities" include all racks, rights of way, easements, operating facilities, storage tanks and other tanks, used in connection therewith. The enactment of this subsection shall not be construed to indicate that the movements specifically exempted herein were subject to tax prior to such enactment'."

Mr. Disney in a statement to The Oil and Gas Journal said it is clear that movements by pipe line "within a refinery or a bulk plant" should not be taxed because such movements are not within principles 3 and 4 set out above. Same are not "transportation primarily independent of a related business transacted by the carrier" and are not movements "substantially similar to that which pipe-line carriers usually undertake and perform." Loading and unloading facilities located on the refinery or bulk plant premises would, but the definition clause and by actual practice and acceptation in the oil industry, be part and parcel of the refinery or bulk plant so that a movement from the refinery or bulk plant to such loading or unloading racks would be a movement "within a refinery or a bulk plant," and therefore not taxable. This would eliminate any difficulties caused by the necessity of determining whether the prior service is taxable in the determination of whether delivery service is taxable.

The third subdivision of the amendment covers cases where the refinery or bulk plant may be located on premises separate from that on which their respective loading or unloading facilities may be located. In order to provide a definite standard by which to determine whether the loading or unloading facility is actually incidental to the refinery or bulk plant operation, a limitation of 10 miles was provided. Common ownership of the facilities and the pipe line was provided for in order to prevent pipe-line movements actually rendered by common carriers from escaping the tax. This exception, however, does not destroy the rule that such services are not of the type normally rendered by pipe-line carriers.

The second provision of the amendment is to exempt movements between two refineries from the tax. The 10-mile limitation is pertinent here because the practice of the industry demonstrates that such facilities are not duplicated within 10 miles of each other unless operated as one refining unit. Each of such refineries performs functions complementary to the other and are not two separate and independently complete functions. The 10-mile limitation furnishes a definite guide by which to determine this question. Again, this provision is consistent with principles 3 and 4 referred to above because the movements exempted would be incidental, and not independent, of a related business transacted by the carrier and is a service that is not usually undertaken and performed by pipe-line carriers. Here, too, common ownership of the facilities and the transportation medium is required in order to eliminate true pipe-line carriers from this exemption. As stated above, however, the fact that provision is made to take care of a common carrier movement in this instance does not destroy the premise that such movements are not of the type ordinarily and normally rendered by pipe-line carriers.

Mr. Disney believes that by the enactment of these definite and tangible rules of guidance, much good will be done both from the standpoint of the Government and that of the taxpayer without a material change in the amount of net revenue that will be ultimately derived from this tax.

Gulf Coast Refiners Name George Reid Secretary

HOUSTON, Tex., July 3.—George Reid has accepted a position as executive secretary of the newly organized Gulf Coast Refiners Association, effective July 1, opening offices for the association in the Second National Bank Building, Houston.

Mr. Reid has been associated with Gulf Publishing Co. since 1926, being made editor of the Refiner and Natural Gasoline Manufacturer in 1932. From 1924 to 1926 he engaged in consulting engineering work and free lance writing in California. For 10 years previous he was associated with a number of independent refineries in North Texas and Oklahoma, the last connection being chief chemist of American Refining Co. at Wichita Falls. A native of Illinois, Mr. Reid later moved to Arkansas where he attended the University of Arkansas at Fayetteville, studying chemical engineering.

GEORGE REID

The association, with 10 independent refiners as charter members, was formed for the purpose of assembling and disseminating statistical information. D. W. Hovey, vice president and general manager, Republic Oil Refining Co., is president; Cornelius Kroll, president of Southport Petroleum Corp., and G. L. Rowsey, president of Taylor Refining Co., are vice presidents, and L. F. Rothermel, president of Maritime Oil Co., is treasurer.

Naval Oil Reserve Survey Begun in California

LOS ANGELES, Calif., July 3.—Emphasizing the Navy's concern over the necessity of immediate measures to insure adequate wartime fuel reserves in California, Rear Admiral Harry A. Stuart, director of naval petroleum reserves, has arrived here on a survey of the state's oil deposits.

As the first step toward consolidation of the Navy's present oil reserves in California, Admiral Stuart announced the expansion of the program undertaken 2 years ago by Comdr. William G. Greenman, inspector of naval petroleum reserves in California. Commander Greenman was relieved July 1 by Lt. Comdr. Wentworth H. Osgood.

Admiral Stuart said the Navy in the past year assembled nine expert petroleum technologists, who will work out of the Los Angeles office in the Navy's policy of utilizing the experience of the state's petroleum industry to guide its oil reserves program. Prof. John Franklin Dodge, of the University of Southern California faculty, has been named technical assistant to direct this work.

Admiral Stuart said the Navy plans to acquire 7½ sq. miles of oil lands in the Elk Hills region from Standard Oil Co. of California. This land, he said, is in the heart of Naval Petroleum Reserve No. 1 and its acquisition is essential in order that the reserve may be protected from drainage. This and other acquisitions of oil-bearing lands were authorized by Congress in the Act of June 30, 1938, permitting the Navy Department to acquire such lands by exchange, purchase or condemnation.

Sale of Fugitive Oil Is Upheld by Court

AUSTIN, Tex.—The Texas Supreme Court upheld the action of the Gregg County District Court in the case of G. A. Davenport and others versus East Texas Refining Co., where the company was sued for the alleged conversion of 160,000 bbl. of oil and writ of error is now refused. A plea in bar was based on a state suit and judgment in rem for 200,000 bbl. of oil alleged produced unlawfully. The oil was fugitive oil caught in a trap on a branch of Glade Creek.

The oil was alleged to constitute a serious fire hazard to the town of Gladewater and of possibly being swept into the Sabine River and pollute that stream.

The District Court appointed a receiver, who reported he could not obtain financial help to store the oil and sold it to the refining company at 22½ cents a barrel. This was approved by the court.

The Appellate Court said the situation presented danger which brooked no delay and that "this large quantity of infammable oil loose and afloat upon flooded streams was comparable to a mad dog loose in a community and called for action then and there."

Mid-Continent Strike Jury Deadlock in Hays Case

A mistrial was declared in the trial of Jack N. Hays, president of local of Oil Workers International Union, charged with directing a riot at the beginning of the strike of Mid-Continent Petroleum Corp. After being deadlocked for 29 hours, the Tulsa District Court jury was discharged; it stood 10 to 2 for conviction. Hearings before the N.L.R.B. examiner in Tulsa were resumed July 5.

Oil-Gas Geology of S. W. Ohio

Above: Part of Serpent Mound fault, Berea outcrop

Right: Ripple-marked shoreline near Winchester, Ohio

Bottom: Map of southwestern Ohio, showing towns and pools

By J. L. HARPER
Geologist

The oil and gas features of southwestern Ohio geology have been overlooked in the literature of that area, and Mr. Harper supplies missing data in detailed report on subsurface conditions.

Much has been written about the geology of southwestern Ohio. The limestones have been reported upon. The two or more glaciers that have covered a great part of the surface left deposits that have been examined very closely. Sand, gravels and ground water resources have been listed. But so far as the writer knows no attempt has been made to publish its geology pertaining to oil and gas possibilities.

These past studies and reports have left us with rather an erroneous picture of the structural geology, so far as we are led to look upon southwestern Ohio as a region of a regular monotonous dip of the strata to the east and southeast. Such is far from the established order.

Regional Geology

Southwestern Ohio lies on the eastern and northeastern flank of the Cincinnati arch, a broad, low anticline extending from Murfreesboro, Tenn., to Cincinnati, Ohio. Near Cincinnati this anticline turns to the northwest and is then known as the Kankakee arch, and continues as such through northern Illinois to near the Wisconsin State line.

The Cincinnati arch first made its appearance as an island in the seas that washed the western slope of the old land mass of Appalachia, to the east. This island was raised above the sea and submerged under the water many hundreds of times. The forces causing this raising and lowering of the land mass are the forces which also caused the folds, domes, terraces, etc., that today make up the oil and gas structures for which we so unceasingly search.

During these formative processes there was, of course, an amount of compression of the strata at some places and stretching of the strata at others, and in between these areas were other areas in which the rocks were undergoing a certain amount of bending, like the action of a hinge. These forces have left their evidence more or less plainly written. Where later obscured by the ice age, the facts of their existence are made available by geophysics.

To the east of the Cincinnati arch, and beginning near Liberty, Ky., the Kentucky River-Lexington-Paris-Maysville fault almost crosses the entire State of Kentucky from south to north. This fault enters the southwestern part of Ohio near Aberdeen, Ohio. It then becomes more or less obscured. But there is evidence to indicate its continuation in Ohio. Displacement here will possibly average 150 feet. It may become a factor in the oil and gas possibilities of the area under examination.

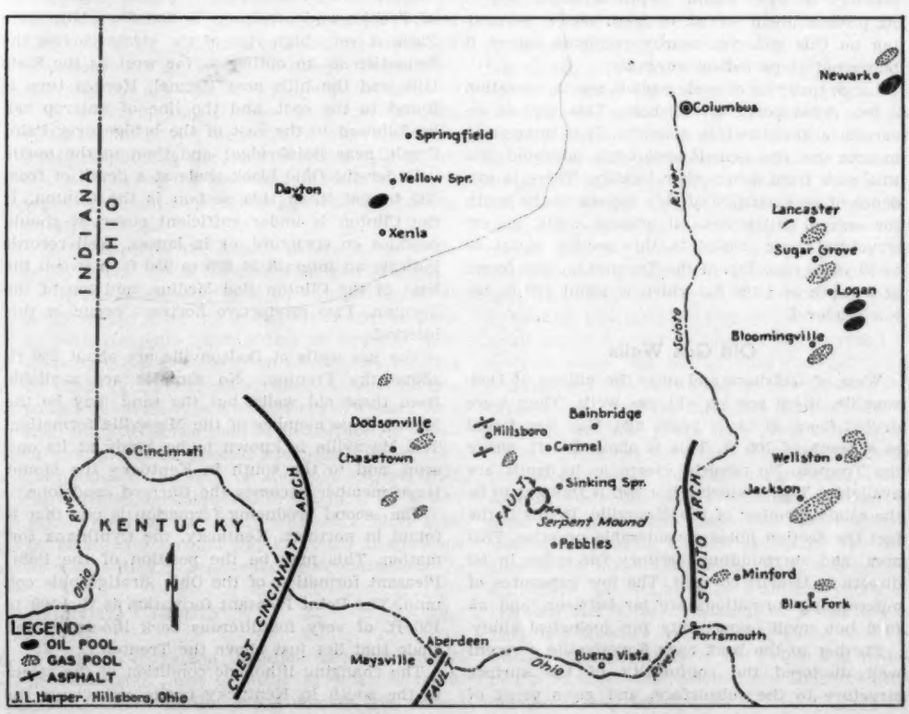
Serpent Mound Fault

At a point bearing north about 32° east of Aberdeen, Ohio, a distance of about 33 miles, is the Serpent Mound crypto-volcanic fault. This is the second of these faults found on the eastern side of the Cincinnati arch. There is also a similar fault in Central Kentucky, on the western side of the arch.

These crypto-volcanic faults do not mean they are volcanic in origin, as assumed by many who are not familiar with geology. In this respect, the use of this word crypto-volcanic is misleading and has caused a lot of misunderstanding on the part of those who assumed the region was volcanic.

If this fault were of volcanic origin, then the region thereabout would contain rocks whose original condition would have been changed, and such is not the fact. Most of the stratigraphic column of rocks for this entire section of Ohio outcrop at one place or another in the faulted zone. Their appearance and composition are the same as found miles away, and under normal structural conditions.

There was compression, both vertical and horizontal, and there is evidence to indicate the direction of these forces. Displacement in the outer blocks, which are more or less downfaulted, is



over 400 feet in some parts of the fault. The inner area is fairly well upfaulted and there are places where the displacement must be about 900 feet, although this is not the average, it being about 400 feet.

This fault may exert considerable influence on the formation of structure suitable for the pooling of oil and gas. Favorable structure exists, and several areas around the fault are to be tested. The result of these tests is looked forward to with much interest.

Scioto Arch

Along the Scioto River northward from Portsmouth, Ohio, to Omega, Ohio, many well records show the location of an arch of over 30 miles in length.

At Portsmouth the top of the Niagara dolomite (Big lime of the Ohio drillers) is 170 ft. below sea-level. Eight miles to the north it has risen to 9 ft. below sea-level. In another 2 miles it has dropped down to 75 ft. below sea-level.

In the Wakefield well the top of the Niagara is 51 ft. above sea-level. Another well to the north, and the rise is to 114 ft. above. Starr Hollow well is 105 ft. above. The top of the arch, according to present records, is at the Wynn well, where the top of Big lime is at 149 ft. above the sea.

At Piketon the drop has caused the same key rock to be at an elevation of 73 ft. above the level of the sea. A well just south of Waverly found the lime at 125 ft. above. The deep well at Waverly topped the Niagara at 75 ft. above sea-level. At Omega the contact was at 27 ft. below sea-level. Some of these wells are still producing small amounts of gas, although very old.

Two or 3 miles to the east of the arch there are more than a hundred shallow gas wells, supplying some small villages and many homes.

The Scioto arch apparently lacks closure on its western side, and therefore has not trapped or pooled oil or gas in large quantities. As a diversion channel and to give direction to possible migration, it must serve a distinct purpose.

Several miles north of the above fault a change in the direction of dip of the strata is noted. Change from the regional east-southeast is first to the northeast, and then to the north. In this area near Bainbridge, Ohio, is an old gas well, possibly in the Clinton. Depth is about 800 ft. At present about 600 ft. of fresh water is standing on this gas, yet nearby residents report it blows out at periodical intervals.

Large quarries of rock asphalt are in operation a few miles north of Hillsboro. This asphalt occurs in a gray-to-white dolomite. It is interesting to note that the asphalt apparently migrated into this rock from some other locality. There is evidence of an extension of this deposit to the south for several miles. Several wildcat wells, all off structure, were drilled in this section about 40 to 50 years ago. Top of the Trenton is here found at a depth of 1,250 ft., which is about 100 ft. below sea-level.

Old Gas Wells

West of Hillsboro and near the village of Dodsonville, there are six old gas wells. They were drilled from 20 to 50 years ago. Gas was found at a depth of 700 ft. This is about 280 ft. above the Trenton. No records, except as to depth, are available. The producing horizon is thought to be the sandy member of the Maysville. If this is the fact the section holds considerable promise. This area, and surrounding territory for miles in all directions is drift covered. The few exposures of outcropping formations are far between, and afford but small opportunity for geological study.

Further to the west near Fayetteville a recent well disclosed the conformity of the surface structure to the subsurface, and gives proof of a possible flexure of considerable closure. Several gas horizons were found, and much gas was used for drilling. Seeps of both oil and gas occur near here.

Additional proof of the existence of a low area, has recently been brought about by the completion of a well south of Zenia. This well found the top of the Trenton at 1,048 ft., which is about 150 ft. below sea-level. Some gas was found at a shallow depth, possibly Clinton. From Zenia to Yellow Springs considerable acreage is being held by a major company. Gravimeter surveys were carried on in this section some months past. About one year ago a small Trenton oil well was found near Yellow Springs. Trenton was reached at depth of 1,198 ft., thus about 170 ft. below sea-level.

STRATIGRAPHIC COLUMN, FROM WELL RECORDS

	Geologic name	Thickness: Highland County, Ohio	Thickness: Pike County, Ohio	Character
Mississippian	Sunbury shale	0- 0	0- 22	Brown bituminous shale
	Berea	0- 15	0- 28	Gritty sandstone; in places limy
	Bedford shale	0- 50	0- 60	Sandy, fissle shale
Devonian-Mississippian	Ohio black shale	246-320	320-450	Dark brown to black bituminous shale
Devonian	Olentangy shale	0- 60	0- 60	Light blue, dark blue, black shale
Silurian-Devonian	Hillsboro sandstone	0- 20	0- 10	White or yellow sandstone
Silurian	Greenfield dolomite			Gray to buff color
	Peebles dolomite			Light gray
	Lilley dolomite			Dark bluish gray
	Bisher dolomite			Yellowish brown
		195-231	267-415	"Big lime" of the Ohio drillers
Ordovician	Clinton shale	100-105	100-120	Blue, brown, green shale
	Dayton-Brassfield Limestone	0- 4 27- 50	0- ? 50- 50	White or cream-colored Bluish yellow, or yellow limestone
	Medina red shale	4- 10	10- 25	Very red shale
	Richmond, Maysville	500-550	550-650	Alternating beds of shales and limestones from few inches to 12 in. or more in thickness, bluish in color
	Eden	200-250	250- ?	Slightly brownish
	Utica	0- 5	0- ?	Blackish blue limestone, shaly near top
	Point Pleasant	150	150	Hard blue limestone or dolomite
	Trenton	480-550	480-800	Shaly calcareous, more or less open sandstone
	St. Peter	400?	400?	

Possible Producing Horizons

Beginning near the Ohio River in the vicinity of Buena Vista, as shown by the map, is the southern outcrop of the bottom of the Ohio black shale and contact with the underlying Niagara dolomite (Big lime). To the north this line of outcrop can be followed. It passes slightly east of Peebles and continues to the Fort Hill State Park. A very high rise of the strata carries the formation as an outlier as far west as the Slate Hill, and the hills near Carmel. Here a turn is found to the east, and the line of outcrop can be followed to the east of the bridge over Paint Creek, near Bainbridge; and then to the north.

Under the Ohio black shale at a depth of from 300 to 400 ft. in this section is the Clinton. If the Clinton is under sufficient cover, it should produce on structure, or in lenses. Well records indicate an interval of 895 to 950 ft. between the base of the Clinton Red Medina, and top of the Trenton. Two productive horizons occur in this interval.

The gas wells at Dodsonville are about 280 ft. above the Trenton. No samples are available from these old wells, but the sand may be the Mount Hope member of the Maysville formation. The Maysville is known to be sandy at its outcrop, and to the south in Kentucky the Mount Hope member becomes the Garrard sandstone.

The second producing formation is one that is found in northern Kentucky, the Cynthiana formation. This may be the position of the Point Pleasant formation of the Ohio stratigraphic column. The Point Pleasant formation is the 100 to 150 ft. of very fossiliferous dark limestone and shale that lies just above the Trenton.

The changing lithologic condition of the strata to the south in Kentucky opens an avenue for further study that might disclose a delta condition.

As previously noted there is a small oil well in the Trenton near Yellow Springs. The question often occurs that Trenton does not produce except in places where the limestone has been replaced with dolomite. Some would have us believe that this change in formation from a limestone to a dolomite was caused by intrusion, or by metamorphic change so that the crystals in the change to dolomite became smaller, and thus the rock became porous.

The Galena member of the Trenton in Wisconsin is a dolomite. The Ohio Trenton appears to have three members, one a dolomite. There is much to substantiate the belief that this third member in Ohio was deposited as a dolomite by Arctic seas. One of the old geological reports of the Ohio survey notes that the whole of the Trenton was magnesian (dolomite) in a well near New Vienna. How far this dolomite continues to the south of New Vienna is not at present known.

In Kentucky the formations have changed, and it may be that deposition there was by seas from the south.

Many sections are under lease. Bulk of the play is by independents, but several of the major companies have large blocks of leases.

Operating conditions are good. Topography is not rough. Living conditions are excellent. The section is well watered. Drilling costs will average $1.50 per foot through the Trenton. Average depth should not be over 2,000 ft. Casing requirements are at most 400 to 500 ft. of 6⅝-in., and a surface water string of 100 to 200 ft. of 8¼-in.

Conclusions

Gas wells and oil showings have been drilled in many other places. Structures and areas discussed are by no means the only ones of promise.

Southwest Ohio offers a diversity of structural conditions. The western rise of the rock strata comes up out of a basin of enormous size. The region has been embayed by the seas countless times, and several overlaps offer areas of change of deposition that might cause accumulation. There are arches, faults, domes, anticlines, and terraces in a variety to suit most anyone.

The drift-covered area, where all structure is fairly well hidden, offers the geophysicist a fertile field. Gravimeter, magnetometer, and electrical resistivity have already been used to some extent, and have brought out most interesting facts. It might be said that part of the area is a proving ground for geophysical methods.

New Antitrust Restriction Is Directed at Managment

By HENRY D. RALPH

WASHINGTON, D. C., July 3.—The proposal to put more teeth in the antitrust laws, frequently discussed in rather vague terms by Asst. Atty. Gen. Thurman Arnold, has found concrete expression in bills introduced by Senator Joseph C. O'Mahoney of Wyoming and Representative Sam Hobbs of Alabama (S. 2719 and H.R. 7035).

These bills would put extremely heavy penalties on corporations violating the antitrust laws and, even more important, would impose drastic punishment on officers and directors having knowledge of their company's violation. The penalties are civil rather than criminal, but they are so severe that in many cases they would mean bankruptcy and a "sentence of economic death" to both corporations and individuals. The bills probably will not be pushed for passage at this session, but it is significant that Senator O'Mahoney is chairman of the Temporary National Economic Committee which is studying monopolies and the effects of the antitrust laws, and that the bill was prepared in cooperation with Mr. Arnold.

The O'Mahoney-Hobbs bill, identical in both houses, amends both the Sherman and Clayton acts as to penalties and definitions, but not as to scope or nature of their substantive provisions. The definition of a company is extended to include any form of business enterprise, incorporated or not, and also the receiver or trustee of a business, and definitions of officer and director are made to include any individual who occupies a similar status or performs similar functions in respect of any company. The new penalties are in addition to, rather than substitutes for, the present civil and criminal antitrust penalties, and the principal provisions of the bill as outlined by Senator O'Mahoney are:

A VIOLATION of any provision of the antitrust laws by a corporation is made a violation by every officer or director who has participated in causing the action to be done.

Officers or directors so participating in causing a corporation to violate the antitrust laws are themselves made guilty of the misdemeanor by the present law.

Such an officer or director is made liable to forfeit to the United States in a civil action brought by the United States a sum equal to twice his compensation from the corporation, in whatever form that compensation may be paid, for every month during which the violation occurred.

Such officer or director may be enjoined from rendering any service, direct or indirect, to such corporation, permanently or for a period not less than 90 days in the discretion of the court, or from receiving any compensation or from engaging in competition with the company he is enjoined from serving.

Any corporation which violates the antitrust laws is made liable to forfeit to the United States in a civil action brought by the United States a sum equal to twice its total net income during every month in which the violation occurred.

Provisions for the consolidation of cases and for preserving the right of trial by jury are contained in the bill.

SENATOR O'MAHONEY, in introducing the bill, issued a statement in which he said:

"One of the principal reasons why the antitrust laws have not heretofore prevented combinations and mergers hostile to the public interest is that the penalties and remedies for violations as now provided are altogether inadequate. Jail sentences are seldom imposed, because the public does not place an economic offense in the same category with an ordinary criminal offense involving moral turpitude. On the other hand, a fine of $5,000 is of no concern to the large corporation.

"There is only one other remedy worth mentioning available under existing law to the Department of Justice—the civil action for an injunction. In addition there is the action for damages by a private person who has been injured. Neither of these remedies is effective.

"The new bill is designed to bring violations of the law home to officers and directors of corporations who are personally responsible for the economic offenses of the corporations they represent. The bill permits the United States, in effect, to bring a suit for damages against an offending corporation and against its individual directors and officers. It also permits the United States to bring suit to terminate the corporate employment of an officer or director who is responsible for a violation of the antitrust laws.

"It is my opinion that bringing antitrust law violations home to the officers who are themselves responsible for these practices will go far to cure many of the restraints of trade which for years have been suppressing business and causing unemployment."

An example of the drastic nature of the O'Mahoney-Hobbs bill is the following extract:

"In any proceeding against any officer or director of any company in respect of any violation by such company, such officer or director, if he shall have had knowledge of any act constituting in whole or in part such violation, shall be presumed to have authorized, ordered or caused such act; and if evidence shall be introduced on behalf of such officer or director adequate to rebut such presumption, the fact of such knowledge shall, nevertheless, be submitted to the jury, or, in any action tried by the court without a jury, shall be taken into account by the court, as evidence of such authorization, ordering or causation."

Mining Claims

A BILL to extend the time in which annual improvements must be made in order to retain mining claims on the public domain was rushed through Congress just before the expiration of the fiscal year. Present laws require that to retain a claim at least $100 worth of improvements or labor be performed each fiscal year until a patent has been issued. The bill provides that "it shall be sufficient, for the year beginning at 12 o'clock meridian July 1, 1938, if such work or improvements are in good faith commenced or or before 12 o'clock meridian September 1, 1939, and prosecuted with reasonable diligence to completion."

Another bill relating to oil, gas, and other mining claims has been favorably reported by the House committee on public lands, the purpose of which is to terminate such claims if the annual improvement work is not performed as provided by the general leasing laws.

The bill, introduced by Representative Edward T. Taylor of Colorado, would remedy this situation by requiring that notice of the existence of such claims be filed in the local land offices.

Divorcement Hearings

HEARINGS on the Harrington bill to divorce marketing from other branches of the petroleum industry were completed by the House judiciary committee last week with the rebuttal testimony of the two leading advocates of the measure, the counsel for the Independent Oil Marketers Association, and William J. Kemnitzer, economic geologist. Both witnesses picked a number of flaws in the testimony of witnesses representing the major integrated oil companies and other opponents of the measure, but at the conclusion of their testimony it was apparent members of the committee were still puzzled as to the effect on the industry as a whole should the divorcement proposal become law.

Both the witnesses attacked the statements of major company spokesmen to the effect that there is competition in the oil industry and that prices are lower now than in 1920. They declared no evidence was presented to show the existence of competition between the majors which control some 85 per cent of the business, and that such competition as does exist is between the majors and the independent jobbers. They also claimed the big decline in prices came between 1922 and 1933, during which period the major companies lost their control of the industry and small producers had an opportunity to reach the market; since that period, they contended, control has again passed to the majors through state conservation laws, the interstate compact, and the Connally Act, and prices have risen considerably.

They also cited some instances which indicated that certain major companies have conspired to squeeze marketers out of business, despite their general denials, and suggested that marketing witnesses opposing the bill are under the influence of the major companies. Both witnesses admitted the bill would cause a shift in marketing methods and a rearrangement of properties and facilities, but they declared this could be accomplished without injury to the public and without nearly as much disruption in the industry as the opponents had forecast.

Plea for Illinois Conservation Is Carried Into Chicago

CHICAGO, July 3.—State regulation of Illinois oil production is being urged at meetings throughout the state as part of the campaign of the Illinois Independent Oil Producers Association. Nearly 70 meetings in 40 counties have been held within the past 2 months.

Speaking before the Chicago Association of Commerce and other businesses at Chicago last week, Charles Van Vleck, executive vice president of the oil producers organization, said waste in Illinois oil fields amounts to more than $2,000,000 a month, as well as loss of many millions of barrels of oil not recoverable by present uneconomic methods of production, and stated the only hope of correcting this waste lay in enactment of fair and reasonable conservation laws. He said the oil industry had expended more than $55,000,000 in drilling in Illinois in the past 2 years.

H. B. Fell, executive vice president of the Independent Petroleum Association of America, pointing out that true conservation has not retarded, but rather increased, scope of the nation's oil operators, stressed obligation of the industry and legislators to cooperate to most effectively accomplish true conservation.

"It should be clearly understood," he said, "that this does not mean to produce the most oil for the least cost for the least time, but to recover the greatest possible number of barrels of oil from the existing reservoir and such as may be discovered in the future at the lowest average cost."

Mr. Fell said engineers estimated that with methods now used, probably not more than 25 per cent of all the oil in the Illinois pools could be produced, whereas conservation practices in the whole country had increased recovery to around 40 or 50 per cent against 25 per cent on the average in 1918. He stated that history is repeating itself in Illinois, recalling that early in the first Illinois oil development 30 years ago, flush production methods forced a great outpouring of oil at low prices.

Speakers said one-fourth of the state's new crop of oil—a one-time, irreplaceable crop—was being forced to sell at an average of 33 cents below the market price of $1.05. Continuation of such conditions is an open invitation for further drastic price cuts. This and the underground waste can and must be stopped, it was asserted.

"We propose to carry on our campaign for fair and reasonable regulation of oil production in Illinois in the best interests of the people of the entire state," stated John Pugh, president of the producers association. "We also propose to keep this campaign on a high plane of economic sanity and common honesty. However, if the independent oil producers, landowners, and citizens of the state in general are to realize the maximum of benefit resulting from proper regulation of the oil industry in Illinois, this program must be put into effect at the earliest possible date."

THE MARKETS*

CRUDE OIL: *No changes. No improvement reported in areas where crude is available under posted prices. Recommended crude production for Texas in July expected to tighten market in fields of that state where crude has been selling under posted schedules.*

REFINERY: *Gasoline reported firm or steady in all refining areas with heavy shipments scheduled for all of July. Improvement noted at several points in heavy fuel oils. Spot demand for light fuel oils inactive. Lubricants firm.*

TANK-WAGON AND POSTED DEALER: *Recent advances in gasoline quotations have not been maintained at most points except in cases where prevailing market was below normal.*

FINANCIAL: *Inactive week results in several oil stocks selling at lowest point this year. Average of 30 representative stocks for week ending July 1: High, 24.92; low, 23.53; close, 23.88. Week ending June 24: High, 25.43; low, 24.76; close, 24.92.*

Additional information in market section.

Triple Damage Suit Filed By Badger Oil Co.

ST. PAUL, Minn.—Suit for $1,684,583 in damages was filed against nine major oil companies in St. Paul federal court on charges of illegally fixing the margin of profit for a McFarland, Wis., oil jobber. A complaint filed by Badger Oil Co., a Wisconsin corporation, claims the firms conspired to fix prices in violation of the Sherman antitrust law.

Named as defendants were Phillips Petroleum Co., Standard Oil Co. of Indiana, Shell Petroleum Corp., Pure Oil Co., Sinclair Refining Co., Socony-Vacuum Oil Co., Skelly Oil Co., Cities Service Oil Co., and Barnsdall Refining Co.

The complaint alleges a conspiracy among the defendants lessened the plaintiff's margin of profit by 2.9 cents per gallon for the 10,742,343 gal. handled from 1931 to 1938, making damages of $311,527. The jobber also claims $250,000 damage to his goodwill and business because of the alleged conspiracy. Triple damages are sought under the antitrust act.

DEATHS

CHARLES HICKMAN, 43, Waxahachie, Tex., oil operator, died last week.

HERBERT BAKER, 73, one-time chairman of the board of Vacuum Oil Co. and later vice chairman of Socony-Vacuum, died July 4 at Sayre, Pa. He was a native of Brooklyn, N. Y., and was with Standard Oil from 1881 to 1906 when he joined Vacuum, retiring in 1932. He was treasurer from 1912 to 1928 and a director since 1918.

JOHN F. RECK, 68, drilling contractor veteran in the Bradford, Pa., oil field, died July 2. He was born December 29, 1870, in Alliance, Ohio. At 18 he began work in the oil industry, moving to Bradford. In the nineties he engaged with Simon O'Donnell of Bradford, in the drilling business at Busti, N. Y. Later he entered oil producing, associated with his father at Eagle Rock, Pa., in Reck, Cooper & Co., Tionesta. Later he drilled at Orchard Park, N. Y. Most of his drilling since was centered in the Bradford field, with the exception of one year as a salesman in the Mid-Continent fields for Clark Brothers of Olean. Few, if any, contractors drilled more oil wells in the Bradford field than Mr. Reck prior to water-flooding. He was one of the first drillers to replace the steam engine with the gas engine in drilling rigs.

"DAN" DANIELS, 75, died in Santa Monica, Calif., June 26. Born at Middlesborough, England, he came to the United States in 1876 and became apprenticed as an iron worker at the Baldwin Locomotive Works, in Lima, Ohio. In 1898, he removed to California as head of the Bakersfield Iron Works. In 1901 he organized what was to become the D. & B. Pump & Supply Co. which was sold to Emsco Derrick & Equipment Co. in 1927. Mr. Daniels made notable contributions to oil well pumping.

WILLIAM D. O'NEIL, secretary-treasurer and manager of The Oil and Gas Journal in the publication's earliest years, died in Buffalo, N. Y., on July 4. Mr. O'Neil left the Journal about 25 years ago to go with the Fulton Iron Works, at St. Louis. Later he established the O'Neil Iron Works in Buffalo, but recently was sales agent for a large woven wire company. Mr. O'Neil married Miss Zella Bovaird, daughter of the late William J. Bovaird of the Bovaird Supply Co., who survives together with four children. The funeral and burial will be conducted in Buffalo on July 7.

Wadhams Oil Co. to Buy 12,000 Bbl. in Illinois

Wadhams Oil Co., subsidiary of Socony-Vacuum Oil Co., has discontinued its purchases in the Mid-Continent field and will buy about 12,000 bbl. of Illinois oil a day, according to reports.

The purchases will be made through an arrangement with Texas-Empire Pipe Line Co. which will take oil from the Illinois field and deliver it to the Indiana pipe line system at Griffith, Ind., near the Wadhams plant.

Magnolia Petroleum Co., Socony-Vacuum subsidiary, is pushing construction of its pipe line from East St. Louis through Illinois fields to Ohio.

Phillips Petroleum Granted Water-Flooding Permits

The Oklahoma Corporation Commission has granted Phillips Petroleum Co. permit to use water-flooding on three leases totaling 200 acres, in Township 25n-16e. Nowata County. Leases are Rebecca Wilkerson in Sections 11 and 2; F. T. Murray in Section 2, and Wade and McOwen in Section 1. Present production from 18 wells is only 6.84 bbl. daily.

The commission also approved recommendatios of J. J. O'Loughlin, assistant conservation officer, that permit to use water-flooding be granted C. L. McMahon, Inc., for W½ SE Section 8-25n-17e, and E½ SW Section 8-25n-17e. also in Nowata County.

Demand for Asphalt Shows 8 Per Cent Gain in 1938

Asphalt demand, domestic and foreign, was 8 per cent larger in 1938 than in 1937. To meet an increase of 355,543 short tons in domestic demand (with a decline of 6,258 tons in exports), refineries enlarged their output 146,952 tons, to 4,506,876 tons in 1938, according to a Bureau of Mines report just issued.

Road Oil Sales Declined 9 Per Cent During 1938

Decreased construction of oil-treated macadam, gravel, and sand-clay highways was reflected in a decline of 9 per cent in refinery sales of road oil—to 7,904,890 bbl. in 1938. As a result of lower prices, the value at the refineries of road oil sold decreased 20 per cent—to $9,704,689.

INTERNATIONAL

Silver Purchasing Factor in Mexican Expropriation Policy

The threat of discontinuance of foreign silver purchases by the U. S. Treasury, if carried out, would be a particularly severe blow to Mexico and might be one method of hastening settlement of the oil expropriation. Mexico has been selling approximately 5,000,000 oz. of silver to the United States per month. When the Senate passed the bill prohibiting foreign silver purchases the U. S. Treasury was paying 43 cents per ounce. Since that time there have been three reductions, the price falling finally on June 29 to 38 cents per ounce.

That the United States silver purchasing policy has been a vital peg in Mexico's shaky financial structure was evidenced by decline of the peso when the Senate acted on the monetary bill. The Bank of Mexico discontinued entirely the purchase of exchange and the peso fell in private transactions to as low as 5.50 to the dollar.

The peso's drop marked the second time in a little over 15 months that the United States silver policies have affected Mexico's currency. After President Cardenas on March 18, 1938, decreed expropriation of foreign oil properties, the U. S. Treasury terminated its contract to buy 5,000,000 oz. of Mexican silver monthly. The peso, which had been pegged for years at 3.60 to the dollar, immediately plunged to more than 5. Ultimately, the Bank of Mexico in effect "pegged" it again by offering to buy unlimited amounts at 4.95 to the dollar and to sell at 4.99. Later the silver purchases were resumed and the peso responded.

The expropriated oil companies have contended that the U. S. Treasury's silver purchases have in effect held an umbrella over Mexico while the Cardenas government confiscated American-owned properties.

There has been no official word from Washington since President Roosevelt was reported to have urged an early settlement of the oil confiscation issue in a conference with Ambassador Najera of Mexico.

The labor union in Mexico is pressing the government for the wage award granted against the private companies by the supreme court, amounting to approximately $26,000,000 annually. The unions contend that the government automatically assumed the private companies' obligations when the expropriation decree was issued. Since the confiscation, the Mexican Government has administered the petroleum industry through autonomous bureaus. The workers are clamoring for direct control of the industry similar to that accorded the railroad unions when the railways were confiscated several years ago. Although no official statement has been issued it is obvious, according to an analysis of developments here, that President Cardenas is reluctant to turn over control.

An Associated Press dispatch from Mexico City said conclusion of an $18,000,000 deal with the Mexican Government petroleum agency was announced July 4 by Santo Vahlis, representative of the Brazilian firm of Correa and Castro.

Under the agreement, he said, Mexico will sell approximately 5,500,000 bbl. of oil annually to Brazil along with asphalt and refined petroleum products. The deal was expected to result in trade far in excess of the $18,000,000 figure annually because, Vahlis said, it "naturally will open new means of commercial exchange between Mexico and Brazil." He emphasized it was a cash and not a barter transaction.

New Refinery for Anglo-Iranian Oil Co. East of Abadan

Another refinery for the Persian Gulf district has been announced by Anglo-Iranian Oil Co., Ltd., in the annual report for 1938 which was received in this country last week. The site has been selected near Bandar Shapur on the Khor Musa inlet about 25 miles east of Abadan and preliminary work on the project is under way. The report did not give additional details as to capacity of the plant nor whether it would be a complete unit for finishing all types of products.

With growth of the Abadan refinery over a period of years to its present status as one of the largest plants in the world, the shipping limitations have been nearly reached which was probably a factor in reaching the decision to build another refinery in the vicinity. Anglo-Iranian has succeeded in proving the new Gach Saran field as a reserve of major proportions and it is probable that crude from this area about 100 miles east and a little south will supply charging stock for the Bandar Shapur plant.

Iran produced 945,000 tons of crude oil during April compared to 913,000 tons in March 1939, and to 923,000 tons in the same month last year. For the first 4 months of 1939 Iran's production totaled 3,344,000 tons, a slight decline compared to 3,605,000 tons for the same 1938 period.

Seismograph Crews Working in Thirteen Caribbean Countries

In the Caribbean countries 13 seismograph crews are operating at the present time. These are distributed as follows: Dutch Guiana one, British Guiana one, Trinidad two, Venezuela nine, and Colombia nine. Of these, Seismograph Service Corp. has the following crews at work: British Guiana one, Trinidad two, Venezuela two, and Colombia one. All Caribbean operations of this company are directed from headquarters established at Port-of-Spain, Trinidad. In addition to the crews mentioned, the company has a crew in Java and two crews in Argentina. A crew has recently returned to the United States from Iran, Asia Minor.

In seismic work conducted in the Caribbean region both refraction and reflection methods are used. The refraction method has been discontinued in the United States but it has been valuable in the Caribbean countries for determining the depth of the granite basement. This has proved to be relatively easy because of the low velocity of sedimentary rocks and the high velocity of granite.

Anglo-Egyptian Deep Wildcat Test Planned On Sinai Structure

Anglo-Egyptian Oilfields, Ltd., is planning or has recently started a deep wildcat test on a mapped structure in Sinai across the Gulf of Suez from the old Hurghada field. Plans for testing the Sinai structure are a continuation or expansion of the rejuvenated exploration campaign in Egypt launched after the country's mining laws were liberalized about 3 years ago. Ten producing wells have been completed in the Ras Gharib field which was discovered during the early part of 1938. The Anglo-Egyptian company is now operating two Diesel-powered rotary rigs in the Ras Gharib area. The company is following a step-out location pattern with a view to determining the extent of reserves available.

Increased Output In Trinidad Field Continued in May

The increased rate of production from Trinidad continued during May when the output was 1,645,040 bbl. The May production total has been exceeded only once before this year. January's production was 1,652,412 bbl. For the first 5 months of 1939 Trinidad's crude oil production is reported to have totaled 7,996,736 bbl., an increase of nearly 14 per cent over the total of 7,021,386 bbl. for the same period last year. The May production compares with 1,481,285 bbl. for the same month in 1938.

Government Test in Peruvian Reserve Producing 100 Bbl.

The Peruvian Government is reported to have succeeded in developing a well producing 100 bbl. of oil per day with high gas pressure in the nationally reserved lands at Pirin in the Department of Puno in the southern part of Peru. An official communique was published during the middle of June in Lima newspapers quoting government mining engineers in charge of drilling operations on the national reserve.

The Pirin region is near Lake Titicaca high above the timber line in the Andes. More than 20 years ago the Titicaca Oil Co. drilled 10 wells to a depth of 800 ft. or less and encountered showings of oil and gas of non-commercial proportions. Later, between 1917 and 1919, Sociedad de Petroleos Espana, successor to Titicaca Oil Co., drilled five more wells, of which three were said to have been small producers.

Refinery Expansion

Fort-Dale Plant Starts Operations in Illinois

BLOOMINGDALE, Ill.—First of two new refineries under construction here will go on stream about July 5.

Rae W. Lewis, president of the Fort-Dale Oil & Refining Co. (name changed from Lake State & Oil Co.), announced that July 5 has been fixed as the date for beginning of refining operations. Plans call for refining of from 600 to 700 bbl. of Bloomingdale crude per day at the start with a gradual increase to 1,000 bbl. per day.

Fort-Dale will operate its own gathering system for supplying raw crude stocks for the plant.

Albert Wiggins, Bloomingdale banker, is secretary-treasurer of the new company; Fred Carlson, of Lawrence, Mich., vice president; and Max J. Lewis, sales manager. J. B. Croll, who constructed the plant, will be in charge of operations as refinery superintendent.

Glenco Refining Co., Inc., headed by Glen Caldwell (formerly of Mount Pleasant and son of T. F. Caldwell, producer and refiner) has a 1,500- to 2,000-bbl. capacity modern straightrun plant under construction. Mr. Caldwell said plans call for completion by July 15. H. C. Eastman, of Midland, is vice president of Glenco, and E. Brown of Midland is secretary-treasurer.

$500,000 Refinery to Be Built in Wisconsin

CUDAHY, Wis.—The Wisconsin Oil Refining Co. is planning the erection of a $500,000 refinery. Plans for the plant are being prepared by the Universal Oil Products Co., Chicago.

Trainload of Tractor Fuel Goes From Kansas to South Dakota

ARKANSAS CITY, Kans.—A full trainload of farm tractor fuel is on its way toward South Dakota from the refinery of Kanotex Refining Co. here. It is believed this is the first time in history that a full trainload of this commodity for agricultural purposes ever has been shipped into the state. This new fuel, especially designed for tractor use, is the result of a bill, passed at the last session of the South Dakota Legislature, legalizing sale of this type of fuel after July 1. It is exempt from state and federal taxes except the 3 per cent sales tax which will apply to all sales of this fuel in South Dakota.

Gas & Oil Products, Ltd., Adds Perco Copper Sweetening Unit

CALGARY, Alta.—Announcement has been made by the Gas & Oil Products, Ltd., that materials are now being purchased for a 1,200-bbl. per day Perco liquid copper sweetening unit to be constructed at the Hartell refinery. This equipment is being installed in connection with cracking facilities now under construction; it will process both cracked and straightrun products produced from Calgary crude. Formerly Gas & Oil Products, Ltd., operated a Perco solid copper sweetening unit processing straightrun products only. This unit was installed under an agreement and license arranged with Perco, Inc., in 1936.

Standard Oil Co. of Ohio Installs Perco Copper Sweetening Unit

CLEVELAND, Ohio.—The Standard Oil Co. (Ohio) announces completion of arrangements through Process Management Co., Inc., New York, eastern licensing representative of Perco Incorporated, whereby a 1,200-bbl. per day capacity Perco copper sweetening unit will be installed in the Latonia, Ky., refinery of its subsidiary, Latonia Refining Corp. Unit construction will begin as soon as the equipment is on the ground. Stabilizer bottoms will be the product sweetened.

Phillips Petroleum Expands Kansas City Refinery

KANSAS CITY, Kans.—Expansion and remodelling is proceeding at a fast pace at the Kansas City, Kans., refinery of Phillips Petroleum Co. Two new stills are being erected at the north end of the Fairfax refinery. Crews are rushing construction of three pressure tanks each having a capacity of 40,000 bbl. for the storage of highly volatile fuels. These are located near the Great Lakes Pipe Line Co. terminal. Included in a future expansion program will be the construction of equipment for the manufacture of petroleum coke.

MISSOURI REFINERY

Joplin Refining Co. plant located at Joplin, Mo., and operating under the joint ownership of Joseph F. Jones and Richard O. D. Jones. The plant was recently remodeled to operate most efficiently at 500 bbl. capacity.

Turner Valley Refinery Adds New Unit

TURNER VALLEY, Alta.—Rapid progress is being made on the new cracking plant for Gas & Oil Products, Ltd., on the Mercury lease, which will increase refining capacity from 2,500 bbl. to between 3,000 and 3,500 bbl. a day. L. A. Boyd, in charge of the plant, is supervising installation of the new Dubbs unit, which will be operated under his supervision.

Ohio Oil Moves Still to Illinois

Ohio Oil Co. has moved the Cross pipe still formerly operated at the Bristow, Okla., refinery to its plant at Robinson, in southeastern Illinois, to enlarge the capacity of that plant.

Two Houdry Licenses Are Granted for France

Houdry Process Corp. of Delaware has recently announced the granting of two general licenses for operation in France. Construction contracts for units to be built under both licenses have been received by E. B. Badger & Sons Co. Compagnie des Produits Chimiques et Raffineries de Berre, France, has purchased a general license for use of the Houdry processes including catalytic processes for gasoline production from Compagnie Francaise des Procedes Houdry, owners of exclusive licensing rights for France.

A unit will be built at the refinery located at Berre-l'Etang, near Marseilles. The unit will produce high-octane motor gasoline or aviation gasoline from fuel oil, gas oil, or low-octane straightrun gasoline.

Procedes Houdry has sold a general license for these processes to Socony-Vacuum. Immediate erection of a Houdry catalytic plant is planned for Vacuum's refinery in France at Gravenchon near Havre. The unit will produce high-octane aviation and motor gasoline from low-octane straightrun gasoline or heavier distillate. Licensees in the United States are Socony, Standard of California and Sun Oil Co. E. B. Badger & Sons Co. is now completing a $35,000,000 construction program on Houdry units in the United States.

Three Rivers Refinery Will Operate Plant

Three Rivers Refinery, headed by Henderson Coquat, recently was incorporated in the State of Texas; it will operate a well-equipped modern refinery at Three Rivers, Tex., to manufacture all grades of coastal lubricating oil as well as low cold test heating oils and gas oils. Ralph Robinson, formerly of the Kendall Refining Co., Bradford, Pa., is managing director with offices at Three Rivers. W. B. (Jack) Pape will be in charge of sales.

Motor Fuels Corp. Starts Levelland, Tex., Plant

The new Dubbs plant, built by the Motor Fuels Corp. (W. D. Richardson and associates), at Levelland, Tex., is now in operation, manufacturing a high-octane cracked gasoline. This plant has copper treating equipment.

Natural Gas

Rehearing on Hugoton Field At Topeka July 31

WICHITA, Kans.—The Wichita rehearing on gas proration of the Hugoton field was concluded with presentation of rebuttal arguments on the proration formula.

Chairman Andrew Schoeppel announced the session would be resumed on July 31 at Topeka when the final arguments would be heard and an ancillary order would be written setting the date for submission of briefs.

In opening the rebuttal argument for the Republic Natural Gas Co., opponents of the order, Robert C. Foulston, drew from James O. Lewis, the statement that "there was a wide variation in the percentage allowable in proportion to gas reserves," citing allowables as low as .0086 per cent to as high as .0613 per cent to support his testimony "that there was a lack of uniformity in the April 1939 allowable."

Mr. Foulston offered an exhibit by Mr. Lewis to show there was an apparent lack of true relationship between the factors of pay thickness, rock pressure, open flow volume, and the estimated amount of gas in place.

Natural Gas Revenues Continue Upward Trend

Manufactured and natural gas utility revenues amounted to $72,620,400 in April 1989, as compared with $68,642,400 for the corresponding month of 1938, an increase of 5.8 per cent, it was announced by Paul Ryan, chief statistician of the American Gas Association.

The manufactured gas industry reported revenues of $31,586,000 for the month, an increase of 3.5 per cent from the same month of the preceding year. The natural gas utilities reported revenues of $41,034,400, or 7.6 per cent more than for April 1938.

Total sales of manufactured gas for the month were 32,626,100,000 cu. ft., an increase of 6.9 per cent. Natural gas utility sales for the month amounted to 113.-378,500,000 cu. ft., an increase of 8.9 per cent.

Manufactured gas sales for domestic uses, such as

cooking, water heating, refrigeration, etc., were 1.4 per cent less than for April 1938. Sales for house-heating purposes increased 34.5 per cent, while commercial uses gained 1.3 per cent and industrial uses increased 17.4 per cent.

Natural gas sales for domestic purposes showed an increase of 7.5 per cent for the month, while industrial sales gained 8.0 per cent.

Gas Pipe Line Companies Deny Jurisdiction in Rates

WASHINGTON, D. C.—Answering the petition filed by the Louisiana Public Service Commission for a Federal Power Commission investigation of the rates for natural gas charged by United Gas Pipe Line Co. and Interstate Natural Gas Co. and for joint hearings by the two commissions, the United asked dismissal of the proceedings and challenged the right of the state body to appear as a party before, prosecute a complaint, or engage in any investigation or hearing jointly with F.P.C.

The Louisiana commission has no authority to regulate the company's rates for natural gas sold, either in the state or in interstate commerce, United Gas Pipe line stated, contending it is not a public utility or common carrier pipe line as it has never exercised the power of eminent domain, possesses no special franchise, privilege or immunity and its "sole undertaking and business in Louisiana is to purchase, transport, sell and deliver natural gas in the performance of private contracts made with certain selected customers."

United stated that neither the state commission nor the F.P.C. has jurisdiction to change the prices fixed by contracts under which the company delivers natural gas in Louisiana and hence "denies that cooperative action of the two commissions beyond the scope of their respective jurisdictions and powers as sought by the complainant is either feasible or desirable."

Interstate Natural Gas Co., Inc., denied jurisdiction of the F.P.C. over its rates and charges, contending it is not a public utility and is not subject to the provisions of the Natural Gas Act. United Fuel Gas Co. has denied that the Federal Power Commission has jurisdiction over charges made in a complaint by the city of Columbus, Ohio, regarding gas rates, claiming it is not a public utility within the Natural Gas Act. It also told the F.P.C. its sales of gas are made to Ohio Fuel Gas Co., supplier at Columbus, wholly within West Virginia, where it operates.

In a proceeding now pending before the Ohio Public Service Commission, both companies which are subsidiaries of Columbia Gas & Electric Corp., contended only the F.P.C. had authority to inquire into fairness of rates between the two companies, but the city of Columbus would not assent to the contention.

United said in its answer to the city's complaint filed with F.P.C. that if it be determined that federal and state commissions have concurrent jurisdiction to determine such matters, the city should be required to elect before which commission it will proceed.

Natural Gasoline

Arkansas Fuel Builds Plant at Shreveport

Arkansas Fuel Oil Co. (Cities Service) started work building an absorption plant in the Shreveport "backyard" field. The plant will have a daily capacity of 25,000,000 cu. ft. It will be erected at the site of the old Gas Center refinery of the Louisiana Oil Refining Co. The company expects to have the plant completed and ready for operation in 60 days.

Cut Bank Refinery Adds Copper Sweetening Unit

Glacier Production Co. announces the completion of a license agreement with Perco, Inc., whereby a 2,000-bbl. per day capacity Perco copper sweetening unit will be installed at its Cut Bank, Mont., refinery, which is now under construction.

Pipe Line Activity

Michigan Gas Transmission Corp. Loops Indiana Line

Marking new pipe line activity in natural gas transmission work, Michigan Gas Transmission Corp., of Detroit, Mich., is now constructing two loop lines paralleling the existing 20-in. transmission line in Indiana. Total length is 16.2 miles, including 15.3 miles of 24-in. o.d. and a 16-in. twin line of .9 mile. The purpose is to increase the capacity of the line which extends into Detroit.

One of these loops will begin at this company's connection with the Panhandle Eastern Pipe Line Co. property at the Illinois-Indiana state line; from this point the loop will extend a distance of approximately 10.3 miles to its Montezuma station.

The other loop starts at the east header of Michigan Gas Transmission Corp. present Raccoon Creek river crossing, and extends eastward approximately 5.9 miles. The Raccoon Creek river crossing is approximately 6.7 miles east of Montezuma station.

In the longer loop there will be a crossing of the Wabash River, which will consist of two 16-in. lines, approximately .9 mile in length.

The pipe will be supplied by National Tube Co. and will be joined by so-called composite construction—a combination of Dresser couplings and welding. Average length of the pipe sections will be 38 ft.; the 24-in. pipe will be 9/32-in., $\frac{7}{16}$-in., and $\frac{3}{8}$-in. thick, and the 16-in. pipe will be $\frac{5}{16}$-in. and $\frac{1}{2}$-in. thick. Wailes Dove-Hermiston bitumastic coating will be used on all pipe. Design of the pipe line specifies that it is to be built to operate at a maximum of 500 lb. working pressure. W. S. Bibb, Kansas City, Mo., has the contract for this work, which is to be completed about July 15.

Cut Bank-Spokane Gas Line Is Being Considered

DENVER, Colo.—Spokane Pipe Line Co., which recently filed articles of incorporation in Montana, is checking possible markets for gas along a proposed pipe line from the Cut Bank field to Spokane, Wash.

Officers of the new company elected at a meeting in Great Falls, are A. B. Cobb, president; E. B. Coolidge vice president; LaRue Smith, secretary, and Frank Miller, treasurer.

Proposed route, announced by E. B. Coolidge, would extend from Sweetgrass Hills through North Cut Bank, west through Browning, south to Kalispell from which it would extend to Columbia Falls and west to Thompson Falls, Coeur d'Aline, and Spokane. The distance will be approximately 300 miles. It is announced the line will take gas from any individual with commercial gas within reach of the line within considerations of volume and pressure. A price of 5 cents per 1,000 cu. ft. will be paid. The company has established headquarters in Cut Bank, Mont. No date for starting work has been announced.

Rocky Mountain Gas Co. Replacing 11-Mile Line

CASPER, Wyo.—Rocky Mountain Gas Co. is completing an 11-mile 8-in. line in the James Lake area, to replace a 6-in. line. It will complete the 8-in. line from Laramie to Kyle junction. Six-inch pipe removed from the old line will be used in laying a line from the recently opened Oil Springs gas field to the Allen Lake field north of Medicine Bow. Work on the Allen Lake line will probably be started this month.

Line From Monroe Field To Jackson, Miss.

SHREVEPORT, La.—A new gas line from the Monroe field to Jackson, Miss., to cost approximately $3,000,000 is being contemplated by Union Producing Co. Mayor Walter A. Scott, of Jackson, said the city commission has been informed by the company that the Jackson field is nearly exhausted and a pipe line from the Monroe field is contemplated.

Pipe Line Rate Set by Alberta

The Alberta government has fixed a pipe line rate from Turner Valley of 9½ cents a barrel on crude or naphtha delivered to refiners' storage tanks and terminal storage tanks at Calgary.

ON AN EASTERN GAS LINE

Tractor with side boom lowering large pipe into position where it can be coupled

PROGRAMS AND MEETINGS

Shell Wichita Safety Chapter Elects Cales Chairman

WICHITA, Kans. — The Wichita safety chapter of Shell Pipe Line Co. has elected George Cales, chairman; Sam Jones, secretary-treasurer; J. H. Ash, program chairman; John Hayley, publicity chairman; H. W. Peterman, social chairman, and A. F. Hughes, J. L. Dudley, and Paul Harris, accident investigation board.

D. M. Farrell, of St. Louis, Mo., pointed out the company did not have a single industrial accident last year, but 10 employes were fatally injured while not on duty. Capt. M. L. Berry, of the state highway patrol, and J. L. Mooney, of Cushing, Okla., also spoke.

Pacific Gas Association Annual Meeting Plans

The Pacific Coast Gas Association annual convention will be held at San Francisco, September 6-9. President Farrar promises a program replete with showmanship and inspiration, and one that will tie in with the gas industry's $150,000 exhibit at the Golden Gate International Exposition. Association headquarters will be the Fairmont Hotel. F. F. Doyle, manager of the natural gas division of Pacific Gas & Electric Co., has accepted the job of general convention chairman. Helping him will be K. C. Tomlinson, Pacific Meter Works, chairman of the entertainment committee; E. J. Hinchey, James Graham Manufacturing Co., chairman of the golf committee; and A. C. Joy, Pacific Gas & Electric Co., editor in chief of the convention newspaper. C. B. Babcock is chairman of a special committee to arrange a public program for September 9 which is Gas Industry Day at the fair. He will have the assistance of R. E. Fisher, chairman of the gas exhibit committee. E. C. Wood will handle transportation; A. J. Nels, registration; P. E. Beckman, properties; and V. J. Thompson, the banquet.

Bignell Secretary of A.S.M.E. Petroleum Division

L. G. E. Bignell, of Tulsa, formerly a member of the editorial staff of The Oil and Gas Journal, and now secretary-manager of the Engineers Club of Tulsa, has been appointed secretary of the petroleum division of the American Society of Mechanical Engineers. He was one of the organizers of the petroleum division.

Eastern District A.P.I. to Meet at Columbus, Ohio

Chairman D. T. Ring announces that the Eastern District, American Petroleum Institute Division of Production, will meet at Columbus, Ohio, April 11-12, 1940.

International Exposition Sets Date for Space Option

Exhibitors at the 1938 International Petroleum Exposition in Tulsa have been mailed contracts for space in the May 18 to 25, 1940, show, General Manager William B. Way has announced. An option will be granted all 1938 exhibitors until August 15 after which date all space not contracted for will be thrown open to new exhibitors or to old exhibitors desiring more space. A plat of the grounds, rates, and other information has also been sent to firms not listed in the 1938 exhibitors' list, but who have requested data. Such information will be sent to any other firm which writes the exposition in Tulsa.

Mr. Way said that a large number of exhibitors have asked for increased space this year and over 50 new firms have asked that they be placed on the waiting list for space available after the August 15 deadline.

State Laws in Conflict With Federal Court Decisions

AUSTIN, Tex.—W. L. Summers, University of Illinois, told 500 members of the Texas Bar Association in convention here that state laws, in failing to protect private rights against injury from drainage of oil and gas except by conservation regulations, conflicted increasingly with federal court decisions.

He said the "rule of capture" in oil and gas law was being overturned gradually by legislative and judicial recognition of public rights against waste and private rights against injury through undue drainage.

"But it does seem strange that private rights are not recognized by Texas courts and the legislature except where the state seeks to protect its rights against waste," he said. "Texas federal courts have repeatedly asserted this view. It seems advisable that legislatures enact statutes expressly declaring the existence of these correlative right-duty relations in landowners, apart from public rights against waste, and authorize an administrative agency to promulgate rules and regulations for their protection."

CHATHAM, Ont.—A subcommittee of the Dominion Government, headed by T. A. Crerar, minister of mines, held a conference at Ottawa recently with Maj. Robert Benson, representing British interests, and W. S. Campbell, of Alberta, on the proposed oil line from Turner Valley to Fort William.

CALENDAR OF EVENTS

July

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, San Francisco, Calif., July 10-15.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, regional meeting, San Francisco, Calif., July 10-17.

INTERSTATE OIL COMPACT COMMISSION, Santa Fe, N. M., July 19-20.

AMERICAN SOCIETY FOR TESTING MATERIALS, San Francisco, Calif., July 23-30.

August

MICHIGAN OIL AND GAS EXPOSITION, Mount Pleasant, Mich., August 1-6.

KANSAS GEOLOGICAL SOCIETY, thirteenth annual field conference, jointly with Illinois and Missouri state surveys and Illinois Geological Society, in southern Illinois and eastern Missouri—August 30-September 3.

September

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, September 4-8.

OIL WORKERS INTERNATIONAL UNION, Hammond, Ind., September 5.

AMERICAN CHEMICAL SOCIETY, Boston, Mass., September 11-15.

MONTANA NATIONAL BITUMINOUS CONFERENCE, Sun Valley, Idaho, September 11-14.

NATIONAL PETROLEUM ASSOCIATION, thirty-seventh annual meeting, Hotel Traymore, Atlantic City, N. J., September 13-15.

October

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Galveston, Tex., October 4-6.

TEXAS DIVISION, MID-CONTINENT OIL AND GAS ASSOCIATION, twentieth annual meeting, Houston, Tex., Oct. 5.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION meeting, Houston, Tex., October 5-7.

AMERICAN GAS ASSOCIATION, annual convention, New York, October 9-10.

NATIONAL TAX CONFERENCE, Palace Hotel, San Francisco, Calif, October 16.

FORTIETH ANNUAL NATIONAL AUTOMOBILE SHOW, Grand Central Palace, New York, October 16.

NATIONAL SAFETY CONGRESS AND EXPOSITION, Chalfonte Haddon Hall, Atlantic City, N. J., October 16-20.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, tenth annual meeting, Fort Worth, Tex., October 18-20.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Los Angeles, Calif., October 19-20.

November

SOCIETY OF AUTOMOTIVE ENGINEERS, fuels and lubricants meeting, Mayo Hotel, Tulsa, November 2-3.

NATIONAL MOTOR TRUCK SHOW, Navy pier, Chicago, November 8-16.

AMERICAN PETROLEUM INSTITUTE, twentieth annual meeting, Stevens Hotel, Chicago, November 13-17.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, Providence, R. I., November 15-17.

December

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION, Abilene, Tex., December.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Philadelphia, Pa., December 4-7.

February 1940

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, New York, February 12-15.

April

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, twenty-fifth annual meeting, Stevens Hotel, Chicago, April 10-12.

AMERICAN PETROLEUM INSTITUE, EASTERN DISTRICT, Division of Production, Columbus, Ohio, April 11-12.

May

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, May 18-25.

June

THIRD WORLD PETROLEUM CONGRESS, Berlin, Germany, June 9-15.

Close spacing, hurried drilling, crooked holes, and careless completion methods left their toll in the Oklahoma City field. Sound engineering practices have done much to repair the damage and will be called on to establish secondary methods to prolong the life of the field and increase its ultimate oil output. The first of a series of two articles reviewing Oklahoma's largest oil field will be found starting on the following page.

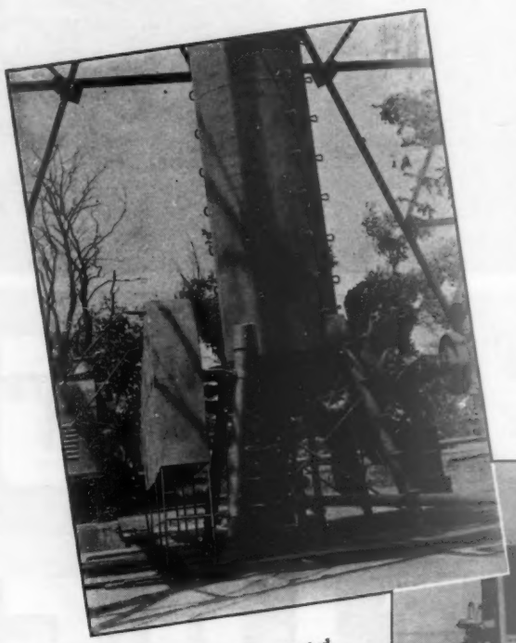
ENGINEERING & OPERATING

JULY 6, 1939

Oklahoma City Field Enters Secondary Recovery Stage

This is the first of a series of two articles summarizing the history, present conditions and possible future of the Oklahoma City field, which is facing a prospective revival through the introduction of secondary recovery methods. The second installment, with map showing recovery up to the present by quarter sections, will appear in an early issue.

By HARRY F. SIMONS



Above: Hydraulically operated pumping unit. The internal combustion engine drives the radial pump which furnishes the lifting power

Above: Running sand pump after a nitroglycerin shot with one of the clean-out units commonly in use in the Oklahoma City field. Left: Rotary rig being used to work over a well at the edge of a portion of the residential district, Oklahoma City

Right: One of the best producing areas is the Lincoln Boulevard parkway just south of the capitol. Lincoln Terrace addition, just back of the building at left, was never drilled and these wells have a large drainage area

THE Oklahoma City oil field has passed through the flush and settled production phases and is now approaching the "secondary" recovery stage. Two developments will hold interest in the area for some time, the first being the plugging back of wells to the shallow producing horizons and the other being the engineering study, now in progress, to determine the feasibility of applying specific secondary recovery methods to the Wilcox zone. Comparing its early days, the field in itself is not so sensational despite the fact it accounts for 23 per cent of the total Oklahoma production. It produces close to 100,000 bbl. daily.

Technically the industry was unprepared for handling the large pressures and volumes of oil and gas encountered, a total of 50 blowouts and 15 serious fires being recorded. Five men lost their lives as a result of burns. Many wells making as high as 70,000 bbl. daily and 150,000,000 cu. ft. of gas through the 7-in. casing were completed; at this rate of production the velocity of the fluid was in excess of 450 miles per hour. The fluid sometimes carried huge quantities of sand. Some wells produced as high as 20,000 bbl. of sand daily.

The early state proration laws were entirely inadequate for controlling the production in the field and as a result a period of three years was spent in wrangling and charges of oil thefts. Proration violations finally ended in the National Guard being called upon to help enforce the Corporation Commission rulings. Later a test of the law was brought before the U. S. Supreme Court and it ruled favorably but voided the penalties levied for violation of the law. The state then revamped its proration law. It was not until after this happened that rules based upon sound engineering were applied, the Corporation Commission ordering the plugging of all but one zone in each well and also approving an order limiting the gas-oil ratio in the field to 7,500 cu. ft. of gas per barrel of oil.

Estimates of Gas Energy Waste

Various estimates of the gas energy waste in the field have been made, one authority claiming at one time that 750,000,000 cu. ft. were being blown into the air while 75,000 bbl. of oil were being produced. This accounted for a gas-oil ratio of 10,000 cu. ft. per barrel. Another authority placed the gas production accompanying the production of 333,000,000 bbl. of oil at approximately 1,200,000,000,000 cu. ft. of gas or 354,000 cu. ft. per barrel of oil. By the spring of 1935, the bottom-hole pressure had declined from 2,650 lb. per sq. in. to between 475 and 480 lb. per sq. in. Now it is between 30 and 50 lb. per sq. in.

The brief history of the field shows that much of the criticism directed at the early operators was partially unjustifiable. The history also explains the field's present condition and indicates its probable future.

In this connection it should not be forgotten that its major development came during the depths of the depression. It suffered during the early attacks on proration. It was used as a proving ground for much of the equipment now

accepted as standard in the industry. The oil price structure throughout its life has been relatively weak and erratic.

From a study of the accompanying production graph it is evident that "as the Wilcox goes, so goes Oklahoma City." The production from zones other than the Wilcox is approximately a straight line with the exception of June and July, 1933, when the production from the Simpson wells reached its peak. The changes in total production for the field are reflected by the same changes in the production from the Wilcox. These changes were the results of fixing the allowables according to the market demand.

The same relation in variation is noted between the "wells producing from all zones" and the "wells producing from the Wilcox" lines. The line showing "miscellaneous formations" shows a leveling off after the peak in 1933 with an increase in the number of wells being shown during 1938. The dropping off of the curve is in part due to the lower price being paid and the uncertain market.

Total accumulative production from all zones in the Oklahoma City field up to May 1, 1939, has been 455,834,158 bbl. according to the latest Corporation Commission records. There is, however, a discrepancy of approximately 9,000,000 bbl. between the Corporation Commission figures and the state Tax Commission figures due to the running of "hot" oil during the early days of the field. The producers paid the tax and the royalty on this amount of oil but made no report on it to the Corporation Commission.

The Wilcox sand zone has accounted for approximately 72 per cent of the total or 327,669,961 bbl. of oil, and the lower Simpson zone for 22.9 per cent of the total or 103,841,501 bbl. The upper Simpson shows a total recovery of 1,966,352 bbl., the Cleveland sand 1,578,217 bbl., the Pawhuska 1,216,069 bbl. and the "miscellaneous" formations a recovery of 19,581,648 bbl. This latter classification includes the siliceous lime, the Hoover, Tonkawa, Layton, Prue, detrital, oolitic, Oswego, and Carmichael.

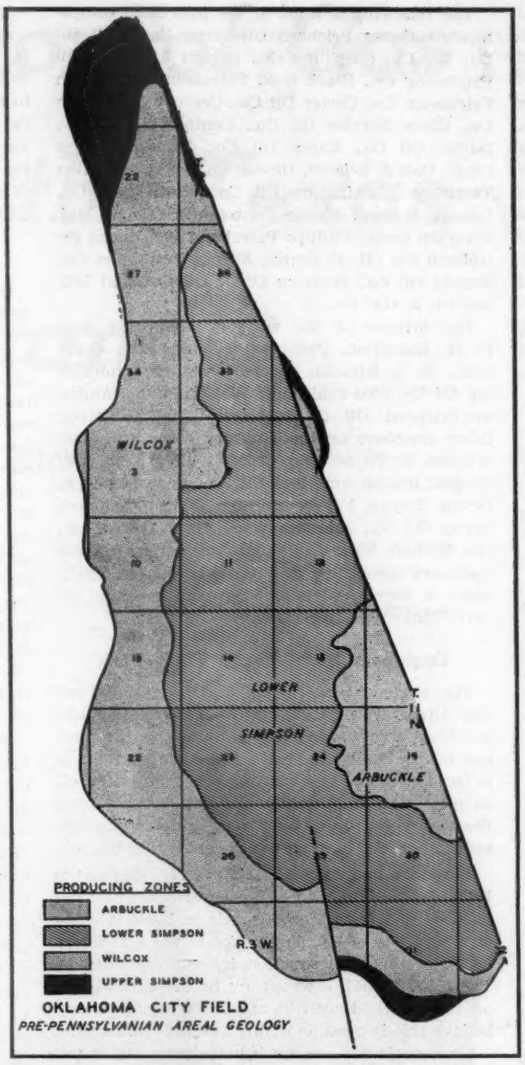
The "miscellaneous" formations are assuming increasing importance because they are primarily the formations to which the wells are plugged back once they can no longer be produced profitably in lower horizons. They are also important as a source of gas, accounting for all but 14,652,000 cu. ft. of the 478,406,000 cu. ft. daily gas potential of the field.

These upper areas account for a daily average production of 2,540 bbl. of oil daily and are exceeded only by the Wilcox and lower Simpson at the present time.

Wells Drilled

A total of 1,498 wells has been drilled in the field, but at the present time only 984 are producing from all of the formations; 364 wells have been abandoned either temporarily or permanently and 150 have been plugged back to the gas horizons. The Wilcox accounts for 547 of the producing wells while the Simpson has 335. The remainder are distributed among the siliceous, the Cleveland, the Simpson lime, and the miscellaneous.

As can be seen from the graph, the production from the zones other than the Wilcox is almost a straight line with the decline in production being offset by the production obtained from the plug-back work. The Wilcox has fluctuated violently throughout its career because its production has been adjusted to meet the market demand. It has a downward trend and the potentials have definitely declined although to what extent exactly is not known.



This map indicates the areal geology of the productive properties in the Oklahoma City field

The original schedule called for taking a potential each 6 months, but this has not been done for several years, the operators agreeing on the decline method instead. The procedure is to take a decline at the beginning of each 6-month period, the new potential being adjusted to 75 per cent of the last potential.

The amount allowed marginal wells varies with each adjustment of the potential, the present marginal allowable being 165 bbl. daily. Wells that will make over this amount are allowed to make the 165 bbl. plus 14 per cent of their potential after deducting the marginal amount.

The potential for April was 323,930 bbls. daily while the daily average production for April was 86,196 bbl. There has been considerable movement which favors taking the potential of the field and an application for that procedure was made to the Corporation Commission. However, as yet no method has been selected. Many operators wanted a uniform method adopted so that claimed inequities may be eliminated. Some are asking for as much as a 15-day potential test to determine the actual ability of the field.

Of the 547 wells in the Wilcox, their ability to produce was gaged as follows by one company engineer:

Wells	Potential (bbl.)	Daily average production per month
15	Over 1,000	21,200
24	750-1,000	19,875
38	500- 750	21,750
111	250- 500	36,664
100	100- 250	15,549
258	0- 100	11,237

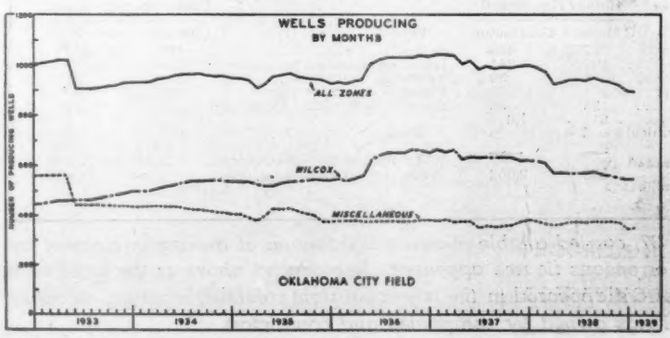
On this basis it is evident that over half of the production comes from wells of less than 500-bbl. capacity daily, and that the field could actually produce about 120,000 bbl. daily.

New Potential Method

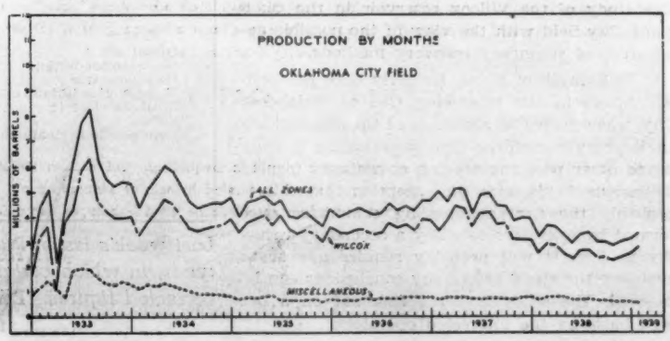
A unique method was recently instituted to obtain the potential for the field for the coming month. An operators' committee composed of engineers familiar with the field arrived at estimates of what the potential would be if tested under periods of varying lengths. The estimates were well received and it was decided to refine the work further and to arrive at a potential by sound engineering principles that would be agreeable to all parties.

As a result a committeee composed of Dwight Funk, Indian Territory Illuminating Oil Co., chairman; Ralph Curtis, Barnsdall Oil Co.; Ed Doyle, British American Oil Producing Co.; Ted Creegan, Carter Oil Co.; Jack Abernathy, Sunray Oil Co.; Millard Neptune, Phillips Petroleum Co., and Massena Murray and Dan Howard of the state proration staff considered the problem and arrived

Wells producing by months in the Oklahoma City field



Production by zones by months in Oklahoma City field



at a potential of 142,466 bbl. after objections and revisions had been effected. Any operator not satisfied with the potential given any particular well was allowed to take a 5-day potential to substantiate his claims; 26 wells were tested with the result that the potential was raised to 148,901 bbl.

The operators thus saved about $250,000 by not taking a physical potential and at the same time feel they have arrived at a fair estimate of the field's ability to produce. Further decline of the field is expected to be at the rate of about 1.33 per cent per month. The engineering study and the actual potentials indicate that the field has held up better than most believed.

There have been several experimental attempts to repressure small areas of the field which have given indications that this method may successfully be used to recover much of the oil remaining in the reservoir.

In 1936 it was estimated (U. S. Bureau of Mines R.I. 3330) that the total recovery from the Wilcox zone would be between 410,000,000 and 460,000,000 bbl. of oil and the lower Simpson recovery would be between 142,000,000 and 171,000,000 bbl. of oil. This was based on the productive acreage, average thickness, porosity, initial reservoir pressure, initial reservoir temperature, gas in solution at reservoir pressure and temperature, average gas-oil ratio for the oil produced, volume of increase residual oil to reservoir oil due to dissolved gas and estimated percentage of oil originally in the reservoir to be recovered. The tabulation of the values follows:

	Wilcox	Lower Simpson
Productive acres	6,900	10,000
Productive thickness (ft.)	100	80
Average porosity (per cent)	26	20
Initial reservoir pressure (lb. per sq. in.)	2,630	2,630
Initial reservoir temperature (°F.)	132	132
Gas in solution at reservoir pressure and temperature (cu. ft. per bbl.)	795	795
Average gas-oil ratio (ft. per bbl)	2,000 to 2,500	7,000 to 9,000
Volume increase residual oil to reservoir oil (per cent)	35	35
Estimated recovery (per cent)	50	40

With the recovery to date from the Wilcox in the neighborhood of 328,000,000 bbl., a total of 132,000,000 bbl. of recoverable oil remains in place. The lower Simpson zone by the same calculation has 67,000,000 bbl. of recoverable oil in place. At the same time the Wilcox zone has been extended until it now covers approximately 7,500 acres instead of the 6,900 credited to it when the survey was made.

The presence of nearly a half billion barrels of oil in the Wilcox sand has attracted the attention of the engineers for some time and is an encouragement to study the possibilities of secondary recovery. The Wilcox is considered a closed reservoir, being separated from other horizons by shale beds above and below.

Recovery Association Formed

Early in March 1939, the operators in the Oklahoma City pool organized the "Oklahoma City Wilcox Secondary Recovery Association" for the purpose of making a complete and comprehensive study of the Wilcox reservoir in the Oklahoma City field with the view of the possible application of secondary recovery methods.

C. V. Sidwell, of Tulsa, formerly with the British American Oil Producing Co., at Oklahoma City, was selected as chairman of the association's engineering committee. The organization is similar to other pool engineering committees formed in various fields with the exception that this is probably the first engineering committee ever formed by operaters to study a secondary recovery project. It will probably require a year to complete the study before any conclusions can be reached. The study is being financed on a per well basis by the interested operators.

The following is a list of the interested companies: Anderson-Prichard Oil Corp., Barnsdall Oil Co., Big Chief Drilling Co., British American Oil Producing Co., Black Gold Petroleum Co., Bryan Petroleum Co., Carter Oil Co., Century Petroleum Co., Cities Service Oil Co., Continental Oil Co., Davon Oil Co., Eason Oil Co., Frabor Hodges Corp., Hall & Briscoe, Helmerich & Payne, Indian Territory Illuminating Oil Co., Kerlyn Oil Co., Lassen & Corn, Mabee Consolidated Corp., Mid-State Oil Corp., Phillips Petroleum Co., Burns Petroleum Co. (H. F. Potts), Sherry Petroleum Co., Sunray Oil Co., Western Crude Oil Co., and Wilcox Oil & Gas Co.

The officers of the advisory committee are: D. R. Knowlton, Phillips Petroleum Co., chairman; M. J. Kirwan, Indian Territory Illuminating Oil Co., vice chairman; Weston Payne, Anderson-Prichard Oil Co., secretary and treasurer. Other members of the advisory committee are: William T. Payne, Big Chief Drilling Co.; Cliff Wright, British American Oil Producing Co.; F. R. Bryan, Bryan Petroleum Co.: W. B. Crutcher, Carter Oil Co.; John Hayward, Barnsdall Oil Co., and William Sherry of Tulsa. The officers of the operators committee are: Robert S. Kerr, chairman; J. Steve Anderson, vice chairman, and Albert Clinkscales, secretary.

Engineers Have Begun Their Task

The engineering staff selected by Mr. Sidwell has already started its task of correlating and checking the information gathered by the various oil companies during the life of the field. It is faced with the task of computing the initial oil in place, the total volumetric withdrawals from the reservoir, the amount remaining in the reservoir, and the best means of recovering this oil.

There are many complicating factors due to the lack of complete records on the field. The total oil produced from the Wilcox is in itself in question, and one of the first tasks of the committee is to locate the production by quarter sections. The 9,000,000-bbl. discrepancy in the official records of the field must be accounted for and many believe this is possible within a 30,000-bbl. margin.

Geological data are much more complete as the geologists in the field checked and traded information.

The amount of gas produced during the early days of the field will also be hard to determine as records were sketchy in many cases and only estimates were made of gas production. The gas-oil ratio for the early life of the field was comparatively low for many wells, but after the bottom-hole pressure declined to 1,900 lb. per sq. in. much of the dissolved gas began coming out of solution. The gas-oil ratio increased rapidly for a time but has since declined as the field approached the stripper stage.

The original bottom-hole pressure in the field was about 2,600 lb. per sq. in. and according to D. L. Katz and W. H. Barlow (A.P.I. Paper No. 851-91) the wells in the Oklahoma City field ceased to flow at an average bottom-hole pressure of 462 lb. per sq. in. The flowing bottom-hole pressure varied with the gas-oil ratio from 300 lb. per sq. in. for wells with a ratio of 4,000 cu. ft. of gas per barrel of oil to 900 lb. per sq. in. for wells with a ratio of 2,000 cu. ft. per barrel of oil.

Reservoir Pressure Diminished

One well, drilled in 1935, gave valuable information on the effect of the bottom-hole pressure, the gas-oil ratio, completion methods, and producing practices in the field. This well was completed about 2,000 ft. away from two wells which had been producing for almost 4 years and on potential test it produced 10,543 bbl. of oil and 21,800,000 cu. ft. of gas for a gas-oil ratio of 2,068 cu. ft. per barrel of oil. The flowing bottom-hole pressure, taken near the bottom of the well was 194 lb. per sq. in. at rates of production of 185 and 300 bbl. per hour. The gas-oil ratios were lower at the high rates of flow (2,068 cu. ft. at 439 bbl. per hour, with an increase to 2,361 cu. ft. at 300 bbl. per hour and 3,086 cu. ft. at 185 bbl. per hour). Apparently the flow from this well at such a low bottom-hole pressure was due to the natural gas-lift conditions which made a flowing fluid level possible. (Bureau of Mines R.I. 3330, p. 78.)

This well indicates that the field had gradually lost its reservoir pressure, but that this drop did not necessarily indicate how much of the oil had migrated to the areas of lower pressure as a result of the expulsive force of the gas. It also indicates that in this particular case the effective drainage area in an oil-saturated sand may be not large.

If the decision is made not to attempt secondary methods, the Oklahoma City field will probably continue along its present lines with the advances in pumping equipment helping to increase its recovery. While its ability to produce is slight as compared to its high point, it still will be an important factor for several years. The decline and abandonment of wells in the deep pay will be partially offset by the plug-back work to the shallow horizons. Even in the stripper stage it will probably continue to be an outstanding field.

A decision to apply modern secondary recovery methods will not be the cause for another "Oklahoma City boom," but it will serve as justification for the Oklahoma City field to retain its position as a very important producing area within Oklahoma. It will probably extend the producing life of the field 25 years. It will also reveal the wisdom of applying sound engineering principles during the early life of any oil field.

DISTRIBUTION OF DRILLING EQUIPMENT BY TYPES

Type—	Rotary rigs owned: Company	Rotary rigs owned: Contractor
Diesel	67	456
Gas-gasoline-butane	137	751
Diesel-electric	6	50
Gas-gasoline-butane-electric	4	80
Straight electric	25	36
Steam	611	1,610
Combination steam-mechanical	6	19
Total	858	3,002

Type—	Cable-tool rigs owned: Company	Cable-tool rigs owned: Contractor
Steam	120	836
Diesel-gas-gasoline-butane	320	839
Spudding machines	317	881
Portable standard rigs	190	492
Combination rotary-cable tool	15	152
Total	962	3,200
	1937	1938
Wells drilled by contractors	24,200	21,000
Wells drilled by companies	7,890	7,600

Last week's issue, Page 37, carried a table showing distribution of drilling equipment by types, in which certain erroneous figures appeared. Reproduced above is the table with corrected figures. The errors appeared in the two upper right columns, reporting on cable-tool rigs owned by companies and contractors

Acidization of Gas Wells in the Texas Panhandle

By D. H. STORMONT

Acidization of gas wells in the Panhandle field of Texas has made much progress since the first well was treated in the summer of 1937. Due to the excellent results obtained from treating both large- and small-volume wells, use of acid for completing wells has been adopted as standard practice by many oil companies. Also many operators are now going in and treating wells that were completed some 10 or 12 years ago without the use of acid, obtaining favorable results in practically all cases.

Treatment of gas wells, in general, is along the lines used in oil well acidization, except there is some difference in equipment used and in the method employed. Treatment, of course, is for the same reason as that of oil wells—to increase rpoduction; acid is pumped down the hole and back into the formation where the chemical reacts to enlarge pores and channels, and due to the increased permeability obtained the well's gas production is increased. Stage treatment is now usually employed.

In acidizing oil wells, oil is used as the loading medium to force the acid into the pay horizon. In treating gas wells, however, this is not feasible due to the likelihood of some oil remaining in the gas pay and decreasing the permeability. Thus either gas or water is used as a load for the acid, with the former being more widely used since it is cheaper, more readily available and has been found to give better results. Also all water placed in the hole, along with the acid, must be withdrawn. This usually requires use of a swabbing machine; and since they are seldom available at the well, one must be moved in to add to the treating cost. In using gas loading it is seldom necessary that a well be swabbed to start gas flow; usually all that is necessary is to reduce the pressure held on the well.

While acidization of Panhandle gas wells was first started in 1937, recent developments in the use of addition agents to reduce the surface tension of the acid, stage treatment, use of chemical plugs and general improvement in the technique of treating have acted to increase the efficiency of treating and insure better results.

Circle: Hook-up on a gas well in the Panhandle using gas taken from the lease line to load the hole. The direct engine-driven compressor, high-volume acid pump and all auxiliary equipment are contained on the truck. Below: After acid has been pumped into the hole, gas compressed in the two-stage compressor is used as a loading medium to force the acid into formation. The compressor is driven with the engine at rear compounded to the truck motor

Reduced Surface Tension Acids

Use of addition agents designed to reduce the surface tension of the regular inhibited acid has greatly increased the efficiency of acidizing gas wells in the Panhandle. The agent not only reduces the surface tension of the fresh acid but also lowers that of the spent acid and the water and brines resulting from action of the acid on the formation. Tendency for the lowered surface tension acid to distribute itself more uniformly in the formation is a significant advantage as it permits acidizing the relatively fine pores so long as the surface tension agent does not become absorbed or decomposed.

In addition to the surface tension acid permitting acidization of smaller pores as well as large ones without excessive channeling, some other important results obtained by its use, as revealed by laboratory core tests and many field treatments, are as follows: (1) The spent acid returns easily and more completely from the formation to the well after treatment; (2) the acid may penetrate the formation faster and with less back pressure.

Among results obtainable by use of a surface tension lowering agent in the acid, probably the most important is the reduction in the Jamin effect which causes difficulty of withdrawing from the formation the spent acid produced from the use of ordinary acid or that commonly termed "penetrating acid." A relatively large volume of carbon dioxide is evolved and not completely dissolved at pressures below 800 lb. as the acid spends itself and the Jamin effect results from the liberation of the gas bubbles in the pores of the formation. In treating Panhandle gas wells pressures are usually maintained above 800 lb. so that very little free CO_2 exists until the well hole is unloaded at the completion of treatment. Then as the CO_2 begins to come out of solution as the spent acid moves toward the well bore where the pressures are lower, a Jamin chain of spent acid and CO_2 bubbles forms in the passages leading to the well which holds back spent acid in the formation. Use of surface tension reducing agents, capable of lowering the surface tension of the spent acid, prevents this from taking place.

In a laboratory test to determine the magnitude of the Jamin resistance, a limestone core 1 in. long and 1 in. in diameter with a permeability of 31 millidarcys was filled with ordinary acid which was 90 per cent spent and allowed to stand until the acid was entirely spent. Upon application of pressure it was found that 4.5 lb. per sq. in. were required to start flow. A similar core with permeability of 31 millidarcys was impregnated with a surface tension reduced acid and the same experiment repeated, revealing that only .6 lb. pressure was required to start flow. Thus addition of the surface tension reducing agent had reduced resistance to flow by 87 per cent.

Use of reduced surface tension agents greatly aids acidization of gas wells as removal of spent acid in a gas well is more difficult than in an oil well due to the greater tendency of the gas to by-pass the spent acid in the formation. Also, in gas wells producing from a very tight formation or in old wells where the rock pressure has declined, the wells have less ability to clean themselves following treatment. This results in the tendency for spent acid to be held in the fine pores of the formation and permits permanent blocking of the passages. Thus through use of surface tension acid, travel of spent acid through the formation to the well bore is freer and more rapid, permitting more prompt cleaning of the formation and producing better results.

In the example cited above, it can be roughly calculated that if a pressure of 4.5 lb. was required to start flow in the first case, a pressure somewhat over 500 lb. would be required to start flow in a section 1 in. in diameter reaching 10 ft. back from the bore hole. Thus through use of an acid having, when spent, a surface tension approximately 87 per cent lower than regular acid the spent acid is moved more freely to the well hole, and less pressure is required for removal of the spent acid from the formation after treatment.

The faster rate of penetration, while employing lower treating pressures, offered by the low surface tension acid also aids treatment of gas wells by increasing the effective radius of acid treatment. While it is desirable to concentrate the action of the acid reasonably close to the well where resistance to flow of the gas is the greatest, this can be accomplished by treating in stages and yet due to faster rate of penetration of the reduced surface tension acid, areas well back from the well bore will be subjected to acid action. Thus permeability is increased a greater distance from the bore hole.

Use of Chemical Plugs

In the Panhandle gas production is obtained in the pink arkose or granite wash, which is made up of feldspars and quartz, and in the overlying dolomitic formations. The former is not acid soluble to any appreciable extent so that no attempts are made to increase its gas production by acidization. However, the granite wash is much more permeable than the overlying dolomites and if not plugged off while the well is being acidized would absorb considerable amounts of acid. Thus in order to prevent loss of acid that might only result in the lower pay being plugged or the formation sloughing, chemical plugs are pumped into the section of the hole drilled in the granite wash.

These plugs are pumped to the bottom of the hole while in a liquid state, but soon gel into a mass. While acid treatment is being carried on the chemical retains its jelly state, but afterwards reliquefies so that it is easily removed from the hole. These gels are also used in plugging off the lower portion of a hole that is nonproductive, thus action of the acid is confined to the area where it would result in increased gas production.

In treating Panhandle gas wells using gas as the medium for forcing the acid into the formation, a truck-mounted compressor of the type shown in the accompanying photographs is used. This two-stage unit is direct connected to the 110-hp. engine mounted on the rear of the truck and can be compounded with the truck motor so that a 200-hp. drive can be placed on the compressor. Although the rear motor could drive the compressor, both motors are normally used. Arrangement of the compressor cylinders is such that the gas may be single-staged if only a low-injection pressure is required on the acid, or it can be changed so that the gas is two-staged to pressures as high as 2,500 lb. if need be. Other equipment mounted on the 5-ton, three-axle truck consists of a 3,000-lb. high-volume acid pump, permanent instrument panel, winch, safety equipment and other necessary equipment such as gages, hose and pipe fittings.

Stage treating is normally used; generally around 1,000 gal. being used in the first stage to clean the face of the pay and place it in a better condition for receiving the remaining stages. Since most Panhandle wells are drilled in with cable tools and fine cuttings thereby jammed into the face of the pay, such treatment is necessary as otherwise there is the possibility of fine, insoluble particles being forced well back into the pay. In acidizing old gassers that have been producing for a number of years, cleaning of the face of the pay is especially important. After the first-stage treatment, amount of acid used depends on the condition of the individual well, but in general second and third stages of 3,000 and 4,000 gal. are used on low-volume wells and 3,000 and 6,000 gal. on large-volume wells.

Following introduction of the acid into the well, the compressor is connected to the lease gas line and gas pumped down the hole. The gas-liquid interface is followed down the hole by means of a float run on a wire line, thus the acid can be forced into the formation at the desired rate and left at the proper level. All of the acid can thereby be pushed out into the formation but not so far that it will be lost and ineffective. After one or two surges pressure is removed and the well allowed to unload itself.

The surging action referred to in the sentence above keeps the acid moving into or out of the gas pay at all times during the treatment. Better results are obtained where the surging action is carried on during the treatment. The surging is accomplished by forcing the acid into the formation with gas pressure, then by quickly releasing the pressure on the well to several hundred pounds below the rock pressure, the acid flowing back out of the formation and up into the pipe. Before any acid reaches the surface, the well is closed in and pressure applied forcing the acid back into the formation.

By surging the acid back and forth into the formation, the insoluble materials taken into suspension will be held there and removed from the well with the spent acid. The additional time required to force the acid into and out of the formation again eliminates the necessity of a shut-in period following the completion of a treatment.

Samples of spent acid taken from wells treated in this manner have contained as much as 50 per cent sludge, and have shown far better increases where other methods have failed.

Use of gas to load the well, instead of water, removes all possibility of the acid being pushed too far into the pay so that some spent acid may remain to block the pores. Likewise, it eliminates the possibility of the acid not being pushed far enough back.

By treating in stages maximum increase in permeability is obtained close to the face of the pay. Action of the first stage is confined comparatively near the well bore, the second treatment enlarging on the action of the first stage and penetrating a little farther into the formation, and the third stage overlapping the area covered by the second and penetrating still farther into untreated sections of the pay.

Results obtained over the past two years show that on an average an increase in gas production of around 135 per cent may be expected from acidization, the per cent increase depending on the well's pretreatment production. Largest percentage increased gas production is of course obtained on small-volume wells, the per cent of increase falling off with increasing pretreatment production. However, the actual increase in potential production rises with the well's potential prior to treatment. Thus a well may be increased from 2,500,000 to 10,000,000 cu. ft. daily potential, an increase of 250 per cent, while a large well of 80,000,000 cu. ft. potential upon being raised to 136,000,000 cu. ft. daily potential will show an increase of 70 per cent. In the first instance, acidization resulted in an increase of 7,500,000 cu. ft., and the second an increase of 56,000,000 cu. ft. in daily potential.

Recent tests on gas wells completed about two years ago, show that wells which were acidized do not show as much decline in potential as those which were not. Thus the increased production obtained through acidization is not temporary, but may be expected throughout the well's life.

Due to the increased permeability realized from acidization, gas wells also show less differential between their open flow potentials and back-pressured potentials.

Progress in METALS

By W. L. NELSON

Leaded Steels Exhibit Improved Properties

Recent developments in the field of metallurgy indicate clearly that the addition of small amounts of lead to almost any of the low-alloy or S.A.E. steels does not impair the physical properties of the steels and permits notable savings in the cost of machining. The steel industry has been particularly interested in reducing the cost of machining many small articles, whereas the oil industry might be more interested in the development of stronger, more shock-resistant and harder steels than those that are now possible because of the difficulties in machining.

In the divisions of drilling and producing, the sizes of the various tools, pumps, etc., that are lowered into the hole are necessarily small and at the same time they must be extremely strong because of the tremendous loads that must be sustained and the conditions of shock that cannot be easily avoided. Further, abrasive action is severe in nearly all drilling operations and failures are particularly expensive because of the great cost of pulling the tools or a pump string from the well. Even much of the equipment that is used aboveground must be kept as light as possible in order to provide ready portability from well to well and often to remote or nearly inaccessible well locations. All of these factors make it particularly necessary to have hard, strong and shock-resistant steels for use in the oil industry. A difficulty in the past has been that the hard, strong steels tend to be brittle or to lack in shock resistance—and it is hoped that the use of lead in steels may permit the use of stronger, harder steels in the oil industry with no sacrifice in shock resistance.

At this stage of development it cannot be said that the leaded steels possess the desirable combination of properties that are enumerated above, but the general properties of the leaded steels, that will be presented in the rest of this article are encouraging. Quoting Nead and others on page 114 of Metals and Alloys, April 1939:

"The beneficial use of lead in steel runs counter to metallurgical expectations, which would have predicted inability to get uniform dissemination because of reported liquid and solid insolubility. There is no background of long-time experience; lead is but an infant in the kindergarten of the alloying elements. As regards screw stock, it is quite a lusty infant. As it grows and passes up through the grades, high school and college, it may be graduated into an important alloying element in a much wider field, since an improvement in machinability of strong, heat-treated steels, without introducing stress-raising inclusions, or deteriorating the mechanical properties, is a consummation greatly to be desired and one that seems to be within hailing distance."

Amount of Lead

The use of lead in amounts ranging from 0.01 to 0.5 per cent has not resulted in the separation of any free lead within the steel. The common amount of lead is 0.2 to 0.3 per cent. Thus far, no indications have appeared that the lead will separate into even microscopic accumulations. The particles of lead, if such are present, are so small that they cannot be detected by the use of a microscope. Allusion has been made to the formation of an emulsion of lead in exceedingly fine dispersion in steel—and it now seems certain that the lead is not in solution in the iron. Of equal interest, the lead does not segregate in the ingot by the methods now being employed by steel manufacturers. In general, the lead appears to segregate to a lesser extent than carbon has been known to segregate in ingots.

Physical Properties

It may be generally stated that the use of lead in the amount of less than 0.5 per cent does not alter the physical properties of the parent steels to any marked extent. In most steels the addition of lead appears to improve the properties somewhat, particularly the yield strength and the ductility properties but not to an extent that is much more pronounced than normal experimental error. However, the strength of some of the higher carbon steels in the oil quenched and drawn condition appears to be impaired slightly by the use of lead. Although experimental data on many steels are available, particularly the free-machining steels often referred to as screw stock, the oil industry is more directly interested in the S.A.E. steels shown in Table 1 which are used in the quenched and tempered condition. As a further indication of the general effect of lead, Fig. 1 shows the change in properties of a 0.45 per cent carbon steel as a function of drawing temperature.

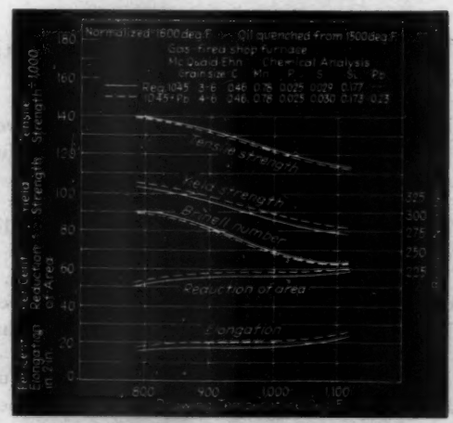


Fig. 1—Physical property chart of oil-quenched S.A.E. 1045 steel with and without lead

The fatigue or endurance strength of the leaded steels is about equal to the strength of plain steels. In hardening the leaded steels by quenching, it appears that the depth of the hard case that is produced on the outside of the article is not as thick as for ordinary steels—this is referred to as shallow hardening. In case hardening, the rate of carburization is slightly retarded by the use of lead, but this can be overcome by the use of slightly higher carburizing temperatures.

Machining Costs

Inasmuch as the oil industry is not primarily interested in machining costs, it will suffice to say that the ease of sawing, machining or drilling ranges from 115 to 200 per cent based on plain steels as 100 per cent. Table 2 indicates the saving in machining costs, in manufacturing several small articles—and the costs given in the table do not give credit for the longer tool life that is found to be possible when machining the leaded steels.

TABLE 2—COSTS OF MACHINING LEADED STEELS

Article—	Type of steel	Cost per article	With Pb	Per cent saved
Base hub	S.A.E. X1112	.059	.046	22.0
Bushing	X1314 and 115 Pb	.028	.023	18.0
Spur gear	X1335	.031	.029	6.4

Many of the data presented in this article were taken from the following articles:

1. Robbins, "Character and Performance of Lead Bearing Steels," Iron Age, Nov. 17, 1938.

2. Nead, Sims and Harder, "Properties of Some Free-Machining Lead-Bearing Steels," Two Parts, Metals and Alloys, March and April 1939.

Metallurgical Terms

Types of Carbon

Carbon may be present in iron or steel in two general forms. It may be combined with some element, normally iron, in the form of a carbide or it may appear as free graphite. The first of these types is referred to as "combined carbon" and the second as "graphitic carbon." Sometimes the two types of carbon are not separated and in such a case, the carbon content is referred to as "total carbon."

Graphitic carbon is found in gray cast iron and in malleable iron but is not normally found in steel. The higher percentage silicon steels contain graphite but they are seldom used. Combined carbon imparts the properties of hardness, strength and brittleness, all of which properties are typical of carbides whereas carbon in the form of graphite makes the material softer and more easily machinable.

Phosphorus

Phosphorus is a nonmetallic element always present, usually as an unavoidable impurity, in commercial steels. Generally the maximum amount allowed by specifications is 0.05 per cent because of its effect in decreasing the ductility and increasing the brittleness. Occasionally it is added in amounts up to 0.2 per cent together with copper and some other metallic alloying element, to improve resistance to atmospheric underwater corrosion.

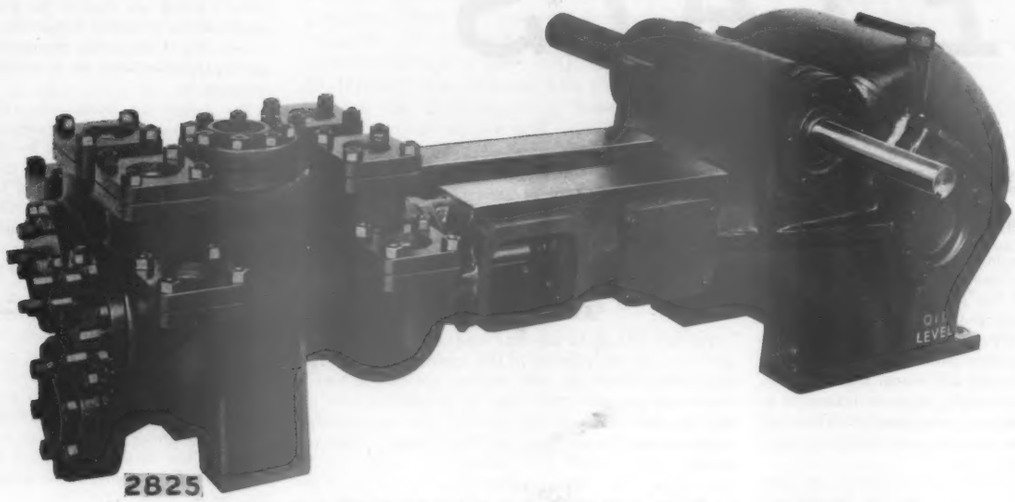
Taken from A.P.I. Code No. 28.

TABLE 1—HIGHER CARBON STEELS, OIL QUENCHED AND DRAWN*

Type	Lead	Quenched from	Drawn	Tensile	Yield	Elong.	R.A.	Brinell	Charpy
2345	....	1475	1150	125,500	85,500	20.0	42.5	220	23.5
2345	0.20	1475	1150	124,000	94,000	20.0	45.5	223	23.0
3145	....	1475	1200	156,000	143,000	19.5	59.0	290	29.5
3145	0.18	1475	1200	151,000	140,000	19.0	58.5	290	30.0
4130	....	1600	1125	133,000	117,000	20.0	65.0	†245	45.0
4130	0.12	1600	1125	119,000	99,000	20.5	61.5	†217	44.0
4640	....	1525	1200	147,500	133,000	20.0	61.0	†270	35.0
4640	0.18	1525	1200	140,000	120,000	20.0	58.0	*260	35.0
6150	....	1550	1200	164,500	154,500	18.0	55.5	315	24.5
6150	0.21	1550	1200	163,500	148,000	16.5	53.0	315	23.5
T1330	....	‡1525	1125	122,500	113,000	19.0	58.0	230	21.5
T1330	0.15	‡1525	1125	121,000	113,000	19.5	55.0	225	20.0
5150	....	1550	1200	152,500	131,000	19.0	57.5	280	30.0
5150	0.17	1550	1200	150,000	127,000	18.0	57.0	280	28.0

*Nead and others, Metals and Alloys, March 1939. †Variations probably caused by accidental differences in adhesion of scale in quenching. ‡Water quenched.

TOTALLY ENCLOSED TRANSIT PUMPS



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Operating Ideas

Serviceable Base for Steam Hoist

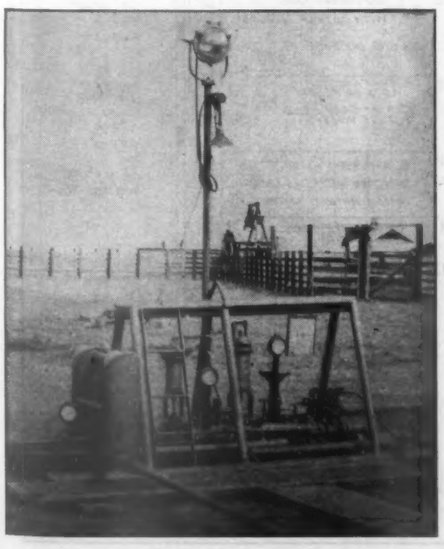
To provide a base for a steam hoist which is rugged and constructed in such a way that it will not dig in while being moved from place to place, a sled suitable for portable use has been constructed in the following manner: The steam hoist was clamped to a heavy 10-in. I-beam that rested in 10-in. channel runners which were turned up. The runners were cut in a sled-like fashion with a piece of heavy plate, welded on the ends and around the bottom; 6-in. I-beams were used at both ends to tie runners together. Diagonals of old railroad rails were utilized to prevent twisting and to add weight. A 12-in. I-beam was welded to the back of the runners for anchoring purposes. Welded construction was used wherever possible.

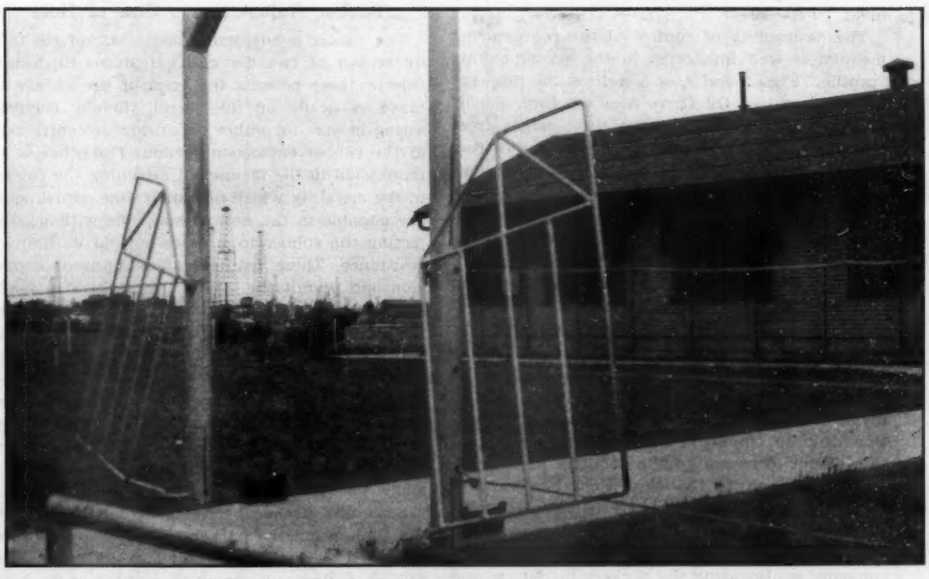
Theft-Proof Cover

Finding it advisable to protect the entire exposed section of the stem on the main control gates on its East Texas wells, to prevent possible turning of the valve with pipe wrench or other tool while handwheel was removed, the company had shallow recesses turned in the valve stems three-quarters of an inch from the normal position of the stuffing box. A cap, outer end sealed by welding, was then made to fit snugly over the exposed stem; an eyelet at the outer end carries a padlock. Drilled and tapped at the point where it would match with the recess in the stem, the cap also carried a hardened steel setscrew which could be turned down to fit into the recess, yet allow full rotative movement of the cap without engaging the stem or working the gate itself. The top of the setscrew was flattened and drilled, being straddled by a yoke which could be used as wrench to place the screw, and then folded down along or parallel to the cap, at which time a hole in the outer end of the yoke matched with the eylet in the cap.

Skid for Equipment

A large oil company operating drilling rigs on the Gulf Coast has designed a steel skid for regulating valves, pressure gages, volume manifold and floodlight. This provides sufficient lighting for a battery of three boilers. A trouble light is also attached to the floodlight to be used in emergencies.





Gates Made From Old Sucker Rods Stand Open

Fences around oil company offices are generally built from the materials at hand, but their beauty and utility depend on the ingenuity of the welder or designer. The gate here pictured is located at the entrance of a major company's field office, and is made from old sucker rods which otherwise would be sold for junk iron. The bottom hanger is bent about 15° so the gates will always swing shut unless they are opened more than 90°, in which case they will remain open without being held.

Design Special Packer for REPRESSURING

By J. P. O'DONNELL

The successful operation of an air or gas repressuring project is dependent on numerous factors. Among those which are receiving increasing recognition from Pennsylvania producers are pattern drilling, closer spacing and improved control of the repressuring medium. The seven-spot pattern with a central intake well surrounded by six regularly spaced producing wells is being adopted generally by the more progressive operators. With spacing limited to a maximum of 300 ft., the concentration of wells in these repressuring projects is approximating that of a water-flood development. On a fairly large property developed on the seven-spot pattern, the density averages one well to about 1-2/5 acres while the average for water-flood projects, developed almost universally on the five-spot pattern, is one well to about 1¼ acres.

Improved control of the repressuring medium is a need that has long been recognized by secondary recovery operators. It is apparent that the success of the operation is dependent in a large measure on the ability of the operator to compensate for variations in sand characteristics by the application of air or gas in various amounts at various pressures to various sections of the producing formation. While this need is fully appreciated, operators have been restricted in their efforts to compensate for the varying sand characteristics by the limitations of available equipment.

The desirability of control of the repressuring medium is well illustrated in the accompanying "profile," Figs. 2 and 3, of a well on the property of the Brundred Oil Corp. near Oil City, Pa. It can be seen that the permeability ranges from 0 to 180 millidarcies on the Second sand and from 0 to 280 millidarcies in the Third. It is obvious therefore that the same volume of gas at the same pressure would not be suitable for the entire sand but that a higher pressure is required for the sections of lower permeability and a lower pressure for the sections of higher permeability and that a division of the two is essential.

This difficulty has been solved to a large degree by the previously mentioned Brundred Oil Corp. through the development of a packer of its own design. This packer enables the company to divide the sand into comparatively numerous sections and to employ a revolutionary method of introducing pressure to the sections in a much closer approach to the ideal than has hitherto been possible. The method is being used with success in the highly variable Venango sands of the Middle District Pennsylvania fields and the company is also using the packers to reduce production of water on its water-flood property near Garnett, Kans.

The packer is a balloon type that is expanded internally with a fluid. Air was used originally for expanding the packers but water was found to be much more satisfactory and is now being used exclusively. This water is admitted to the expansion section of the packer through three ⅜-in. nipples in the 2-in. barrel upon which the expansion section of the packer is mounted and which also serves as part of the tubing when the packer is in the hole. Water is held in the tubing under pressure which combines with the hydrostatic head to provide ample pressure for effecting an efficient seal between the wall of the packer and the wall of the hole.

When repressuring with gas it has been found that an internal expansion pressure of 100 lb. above that of the repressuring medium is entirely sufficient to make an effective seal. However, proportionately greater pressures have been found necessary to cope with the greater intake pressures used in water-flooding. When used in water-flooding intake wells a margin of 200 lb. pressure over the pressure of the water at the face of the sand is maintained. This is accomplished by the addition of bentonite and Baroid to the water in the tubing, the specific gravity of the water thus being raised to the desired level, about 1.8. At Garnett an air-driven pump maintains a high pressure on the water in the tubing not only to provide additional pressure for the expansion section of the packer but also to offset the effect of any seepage at the collar. That this seepage is of minor consequence is evident from the fact that the pump makes but two or three strokes per day and that its movement is not discernible to the human eye.

Packer Adjustable to Size of Hole

The packer is adjustable to the size of the hole by reason of two distinctive features in design. One of these permits the ends of the packer to move vertically on the barrel, thereby compensating in part for either expansion or contraction of the rubber expansion section. The other is an innovation in the manner of attaching the rubber to the metal by which unusually free adjustments are possible in the normal size hole without subjecting the rubber to stresses beyond its limit of resistance. These features allow unusual expansion and permit the use of the packers in fairly large diameter holes. In tests, packers designed for 6¼-in. holes have been set in 8-in. casing and subjected to pressures of 1,200 lb. per sq. in. without failure. The packers are made in different lengths, usually with a 12-in. rubber surface. Longer sizes are available if the operator desires to shut off water-bearing sections or comparatively thick impermeable streaks with the use of a single packer.

Since the packer barrel is actually a part of the tubing and the packer is not set by shortening or telescoping the tubing or by some such release method subsequent to running in the hole, it can be set as accurately as the hole can be measured. This is a particularly advantageous feature in repressuring because of the absolute necessity of segregating an entire streak in order to prevent bypassing, a certain consequence of

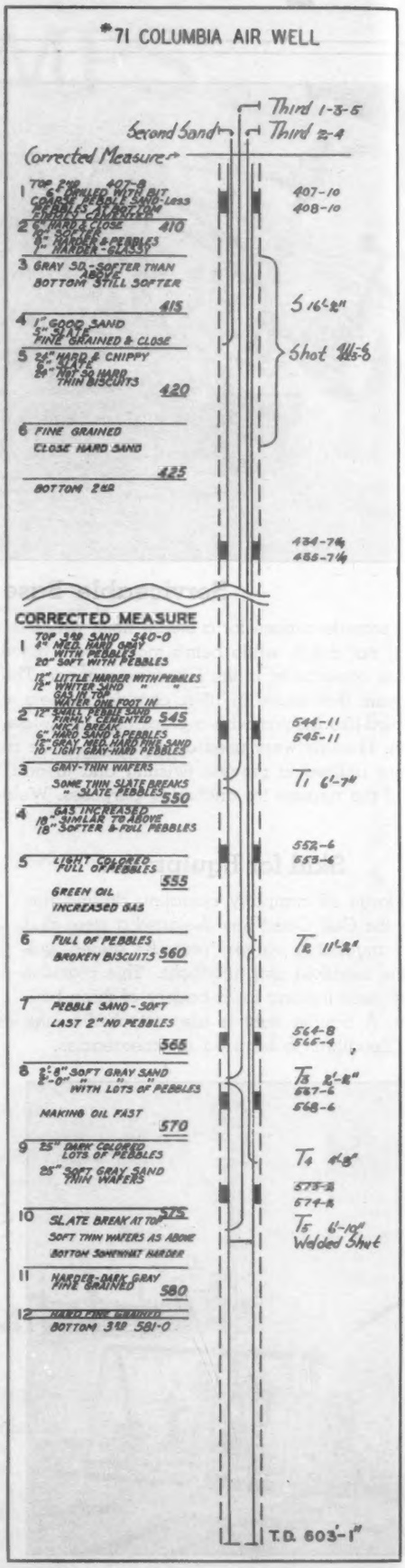


Fig. 1—Showing Second sand being repressured by a single injection line

allowing a highly permeable streak to receive the greater pressure intended for another section.

However, the most desirable feature of this packer is that its use enables the operator to divide the producing formation into comparatively numerous sections. Since there are often fairly large sections of sand of approximately the same permeability, the closest possible setting of the packers is seldom required. The most packers the Brundred Oil Corp. has used in a single hole so far is nine. (See Figs. 2 and 3). While the number of packers usable is limited only by the thickness of the producing formation, variations in volume, pressure, amount and time of the injection of the repressuring medium are limited by the number of injection lines that can be carried in the 2-in. tubing and also by the flexibility of the pressure plant. The greatest number of injection lines used so far in a single well is five.

Introduce Repressuring Medium

The repressuring medium is introduced to the sand through the ⅜-in. butt weld galvanized lines. These lines are run through the tubing to the desired depth and welded to openings in the tubing at the sections which are to be repressured. If the same pressure is to be applied to two or more sections, a similar connection carries the repressuring medium from the annular space at the higher point of admission to the lower point or points. This method is illustrated in Fig. 1 (No. 71 Columbia farm) which shows the Second sand being repressured by a single injection line. Two lines, however, supply the Third sand. One of these supplies the first, third and fifth sections and the other, the second and fourth sections. This diagram illustrates how the repressuring medium enters one section and may be conveyed from that to one or more lower sections. It also shows at the left the type of formations encountered and, at the right, the setting of the packers and the points (S, T_1, T_2, T_3, T_4, and T_5) at which the air or gas is admitted to the sand. The packers in this well were expanded with air and, therefore, no release mechanism is shown.

Great Strength Not Necessary

While these injection lines carry pressures up to 300 lb. per sq. in. in repressuring, great strength is not necessary for the effect of the internal pressure is offset by that of the external pressure of the packer expanding medium.

Removal of the packer when expanded by a fluid is a simple operation. The injection line supplying the bottom section either supplies only that section or supplies it first. Therefore, it runs the full length of the tubing and can be raised or lowered from above ground without pulling the tubing. The lower end of this line consists of a 30-in. section of polished brass pipe sealed at the bottom and perforated about 20 in. below the top. This pipe fits into a stuffing box connected to a larger pipe which admits the gas to the sand. When the perforations are raised above the stuffing box, the liquid in the tubing is admitted to the ⅜-in. line. By the simple expedient of admitting compressed air to the tubing or to the injection line an air lift is established and the water is removed by this method. Removal of the liquid collapses the packer and the entire string can be removed easily.

All of the input wells on the Brundred Oil Corp. properties are now being cored. The data obtained from analyses of the cores are plotted in profile according to the permeability, saturation and porosity with the first furnishing the principal guide to the location of the packer. The ideal setting is, of course, at an impermeable streak or shale break where vertical travel of the repressuring medium is certain to be prevented. However, large sections of an approximately uniform sand are some times divided in order that one section may be shut off in the event bypassing develops in it. In addition to dividing the sand according to permeabilities, the packers are also used to shut off water streaks.

An example of the type of intake well profile employed by the Brundred Oil Corp. is shown in Figs. 2 and 3. These profiles are for the Second and Third sands, respectively, as encountered in the company's No. 105 well on its Columbia farm lease near Rouseville. The profiles were prepared by the Oil Core Testing Laboratories, Inc., of Titusville. The curve at the left illustrates the permeability in millidarcies, the first one to the right illustrates the oil content in barrels per acre foot and the second curve to the right illustrates the porosity in per cent.

Fig. 2 shows the Second sand divided into three

Fig. 2—Second sand divided into three sections by four packers

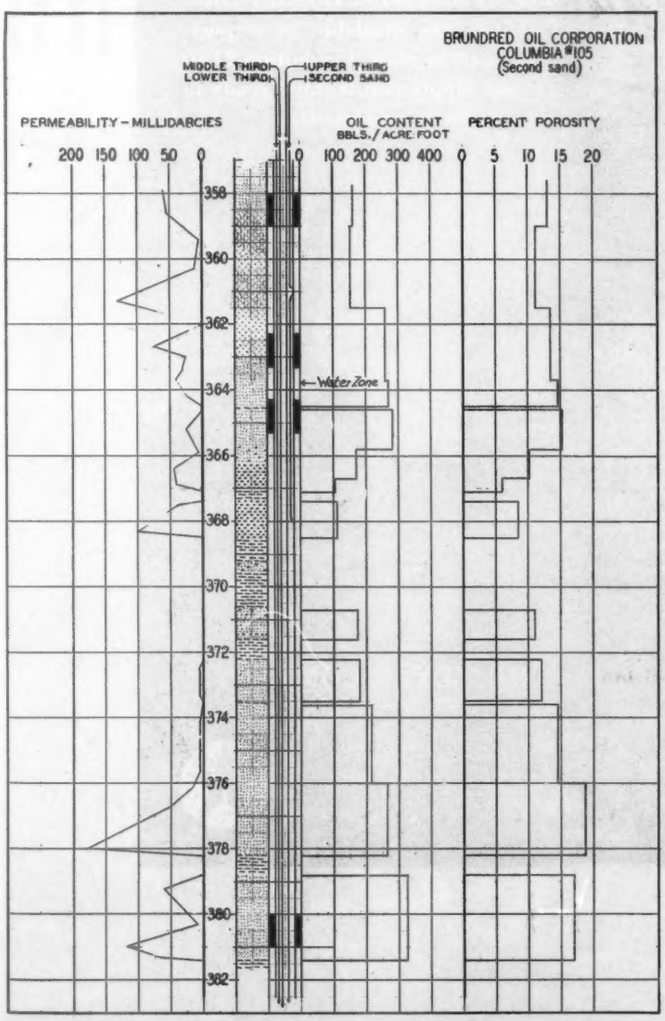
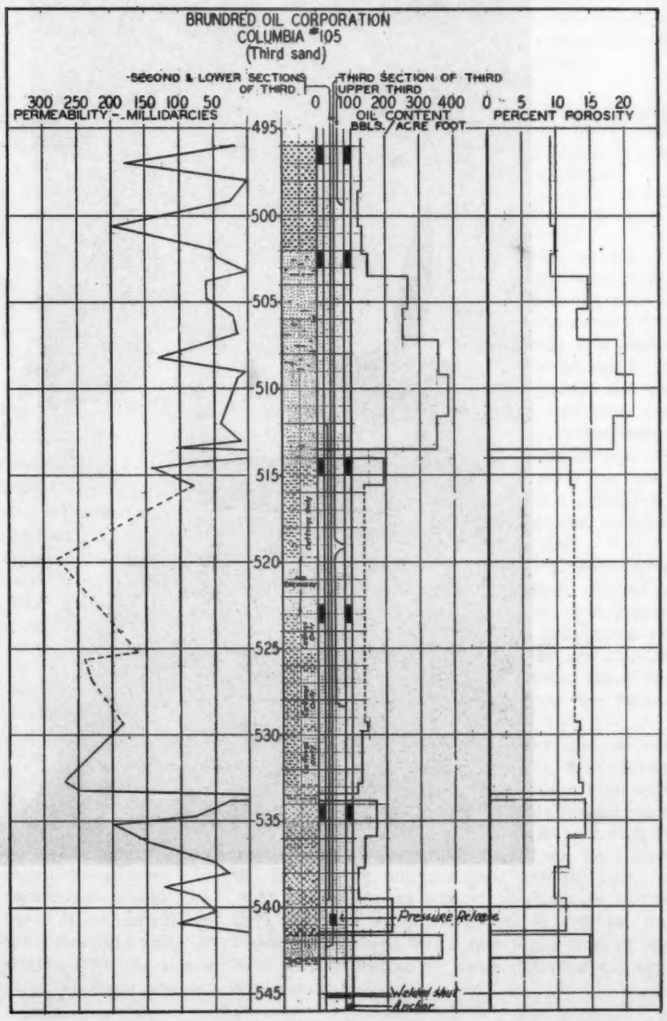


Fig. 3—Showing Third sand divided into five sections by five packers



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sections by four packers, the uppermost set at the top of the sand at 358 ft., the second and third to blank off a water zone at 363½ to 364½ ft. and the fourth at the bottom of the sand at 380 ft. It will be noted that both the upper and lower sections are receiving the gas at the same pressure, the division being required by the water-bearing streak.

Fig. 3 shows the Third sand divided into five sections by as many packers. The uppermost is set at the top of the sand at 496 ft., the second at 502 ft. at an impermeable streak, the fourth at 523 ft. to break up a fairly uniform sand between 515 ft. and the impermeable streak at 534 ft. and the fifth at that point. It will be noted that the second and fifth sections of this sand are receiving the same pressure. Since the fifth is the lowermost section it is here that the pressure release is set to be controlled from the surface. The gas therefore is admitted first to this section and then bypassed upward to the second section.

Another factor taken into consideration in determining the setting of the packer is the measurement of the diameter of the hole. This measurement is made with a so-called "shot-hole recorder" which was developed by R. B. Bossler, production engineer for the company, and which was described in the June 30, 1938, issue of The Oil and Gas Journal. While it is now the practice of the Brundred Oil Corp. not to shoot intake wells, the size of the hole nevertheless varies because of cavings. Sometimes this enlargement is so great as to prevent the effective seating of the packer.

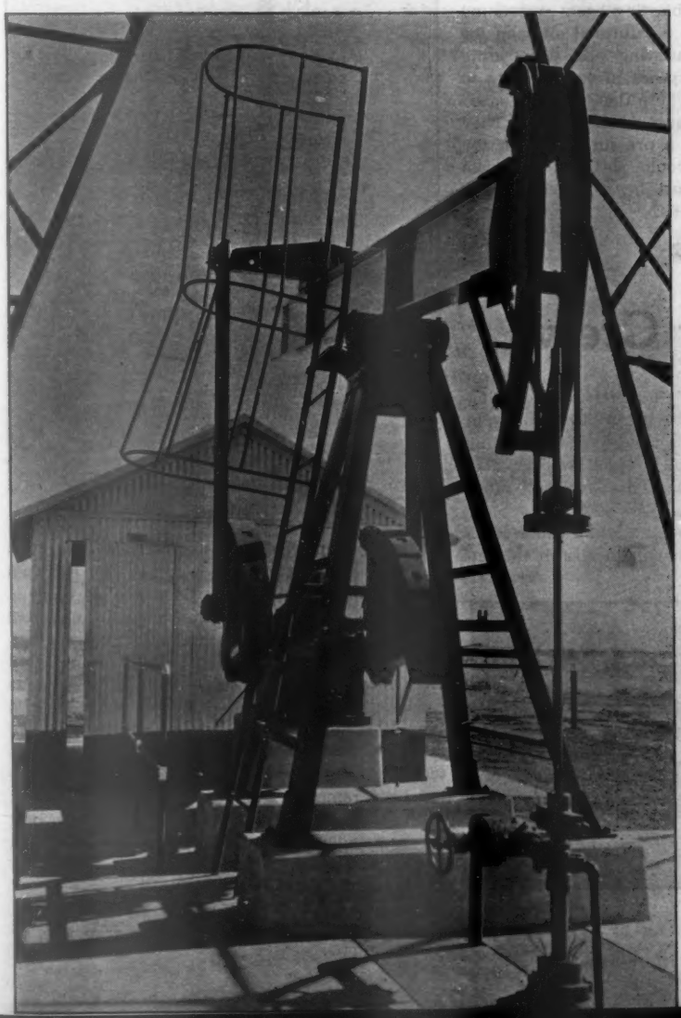
Location of Packer

After the desired location of the packers is determined by these methods, the assembly of the tubing, packers, injection lines, etc., is begun. The bottom of the tubing is welded shut above the anchor. As the tubing is run in the hole it is measured carefully and the packers are run in at predetermined points. The injection lines are installed at the same time. If the packer locations are made according to measurements obtained from the data shown in the profile, there is no possibility of the packer being set at any but the desired point.

A color system is used to identify the injection lines both during and after installation. The line supplying the highest section is daubed with yellow paint; the next, green; the next, red; the next, black, and the bottom line is left undaubed. Identification of the injection lines is necessary in order to regulate the input pressures or volumes and also when, after bypassing develops, the different sections are shut off to determine which is responsible or when "slugging" or intermittent application of pressure is undertaken.

This company is using a similar method in producing wells on its water flood property at Garnett, Kans. Since these are flowing wells the absence of pumping equipment makes the use of this equipment possible. The purpose is to limit the production of water and therefore reduce water disposal requirements. The sand is divided into several sections by the packers and each section is produced individually. When one section develops a larger amount of water than can be economically handled a valve on the producing line, which corresponds to the injection line in repressuring, at the top of the well is closed and only the remaining sections are produced.

SAFETY — Guard on Pumping Unit Ladder



Climbing around on pumping units can be hazardous and for this reason most manufacturers today include a ladder for the use of the pumper while oiling up or making adjustments to unit. The locale in which the unit is used often determines the other safeguards which must be added.

This installation is on a major company's property in West Texas —an area noted for its strong winds. While the wind is seldom strong enough to blow a man from the ladder, it is of sufficient velocity to cause him to fall. The worker may be bracing himself against a particularly gusty blow and when the breeze diminishes may lost his balance.

To help prevent injuries due to falls, this company has installed cages made from old sucker-rods around the top 6 ft. of ladders on their pumping units. A worker then has something to brace against while working. Another safety feature is the location of the pipe fence which guards the reduction gear and counterbalances on the unit. The door from the shed opens outside the fence, preventing a pumper from walking into danger when leaving the engine room. The smooth concrete platform is also a great aid in preventing accidents.

FIELD QUESTION—ANSWER

In finding about 5 feet of oil in a wildcat in very hard lime, is it advisable to shoot such a well?

It is supposed to be on top of a structure. If dry, will it be worth while to drill another well on the flank?—J. K.

Two methods are commonly in use for increasing the production from small lime wells, shooting and acidizing. The effect of the shot is to crack the formation, allowing the oil to drain into the well bore. The hydrochloric acid reacts with the calcium carbonate in the formation to produce calcium chloride, carbon dioxide and water; the removal of the calcium carbonate, the principal cementing material in the limestone, increases the porosity and permeability of the formation and allows the oil to enter the well. Many small wells are now made into commercial producers by the acid treatment, the increase often being as much as 500 per cent.

The amount of acid used in such cases varies from 200 to 10,000 gallons, the latter amount is injected either as a single treatment or in stages. There are several types of acid used, some inhibited and some uninhibited; they are adapted to pecularities of certain formations. There are also "blankets" and seals to protect the formations above and below the acid.

There are few lime formations that do not respond to acid treatment. However, it should be kept in mind that each formation and each well has its pecularities and it is best to consult your local shooter and local acid man as to how best to proceed with your small producer. They may be able to turn it into a good well for you.

If the well is on top of the structure and is dry, it would not be advisable to drill on the edges unless there was a heavy gas flow in the first well, indicating an accumulation of oil with a gas cap.

Characteristics of Modern Oil Well Explosives Understood

By WILLIS A. HILL

In the normal productive sand the oil lies dormant and confined except where the pressure is high and the sand is relatively loose. The mere drilling of a hole into the sand does not make the well profitably productive.

It has been customary to shoot the sand to thus loosen it and ease the flow of the oil or gas. As a result the well is more likely to become a paying producer.

First Well Shot

The first shooting of oil and gas sands was prompted by the noticeable increase in the flow of a water well following a shot of black powder that was placed alongside a string of drilling tools. The tools had become stuck in the hole and could not be loosened in any other manner. This event and the resulting discovery occurred in the year 1860. It was carried out at Dennis Run, in Warren County, Pennsylvania, by Henry H. Dennis, the well owner.

The unexpected and highly desirable increase in the well's production induced others to shoot where the sand had a showing of oil, and the general results were so favorable that no other explosive was considered for the following 6 years.

Then came the inevitable drilling of what appeared to be a dry hole. However, because the sand was close and hard to drill, the owner decided to shoot with a high explosive. As nitroglycerin had been introduced into this country several years previously, attention was attracted towards it. This had never been considered practical for use in an oil sand. It was decided to try it in this dry hole.

The reason for the delay in trying it was the great danger in handling, and because it was known to be almost useless for most blasting problems except when slowed with suitable absorbents. The results from shooting the "dry" hole was to make a 40-bbl. oiler out of a suspected failure. This was nitro's introduction as an explosive for shooting oil and gas wells.

It is generally conceded by oil producers that the concussion from a shot not only loosens the binders of the oil-bearing sand but it also causes liberation of gas, the expansion of which acts as a propellent to move the oil through the loosened sand and towards the drill hole.

A characteristic of liquid nitroglycerin as a blasting agent is its high speed of detonation. The speed is too great for the rock formation to telegraph its concussion blow and thus render cracks that would conserve the power of the shot until its work is done. This results in a highly shattered rock facing and the loss of most of the power available from the explosive to a place of lesser resistance.

Found to Be of Advantage

However, this same characteristic of nitroglycerin as an ordinary blasting agent was found to work to advantage in a saturated oil sand for the reason that its shattering and penetrating effect allows petroleum gases of low density to spread out to the point where their reduced speed and power give the required concussion. They do this without leaving a pressure pack on the disturbed sand which would obstruct the usual oil production. This must be considered when shooting low-pressure wells.

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Mobile Homes for Drilling Crews

A common complaint of drillers, tool-dressers, roughnecks and production men is the lack of satisfactory living accommodations in boom towns. Suitable quarters are often not available or are offered at unconscionable prices.

In the days of poor roads, mushroom towns sprang up wherever there was oil development of any magnitude and these were mostly filled by oil workers who had left their families living under more normal conditions. With the advent of hard-surfaced roads the boom towns are fading from the picture and now the oil worker may take up his residence in a town as far as 30 miles from his work.

This idea works out fairly well in some areas as the towns are large enough to absorb this increase in population without causing a shortage of satisfactory housing. In smaller communities the housing capacity is soon reached, and under the old law of supply and demand the rent then rises sharply. There are also some communities which have gained the false impression that the income of the oil worker is large and that he is a fit subject for some none-too-gentle gouging.

Many of the workers, and particularly those without children, have solved this problem by purchasing a home on wheels which they can park on the lease or alongside a house in town. These trailers are generally equipped with connections for water, gas and electricity. Rental fees for parking space are nominal in comparison with house rent. The trailer-owner-worker is also able to move quickly, in some cases as much as 200 miles, without missing a single day's work.

Another use for trailers is for offices for contractors and oil companies.

●

Casing Removed From Dry Holes

The cost of casing per test varies but it generally is one of the largest items in drilling a well. The test often turns out to be dry or it may produce for only a short time. Or even if it comes in a good producer it will eventually go dry and the well will be sold for salvage or the quipment, including the casing, will be reclaimed.

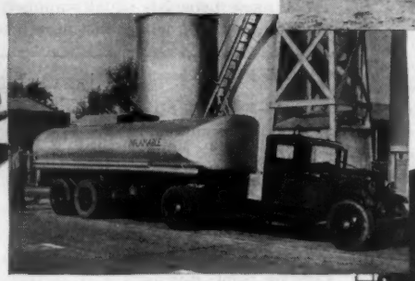
The accompanying photograph was taken in one of the Michigan town-lot areas and the well was a short-lived producer. The crew is reclaiming the casing by using a mechanically operated hydraulic jack which is capable of taking a 5-ft. lift. The jack is equipped with slips which will slide down the pipe but which will grip it as soon as the spider is started upward. After a joint is jacked from the hole it is unscrewed and laid down by use of the derrick line shown attached to the upper end. After sufficient pipe has been removed from the hole and the weight of the casing string reduced, it is possible to pull the remainder of the pipe with the mast and blocks. The latter is much quicker but the load limitation restricts its use.

80 TIMES AROUND THE WORLD

Below you see four Ford units with a combined mileage of more than 2,000,000 miles—about 80 times the distance around the world.

1935 131½-inch Ford V-8 Dump Truck with special body and trailing axle, owned by S. H. Bacon Co. of Los Angeles, California. More than 400,000 miles.

1936 112-inch Ford V-8 Panel, purchased in November, 1935, by Joy V. Thrash of Emporia, Kansas. Mileage now exceeds 508,000.



1934 Ford V-8 Tractor owned by C. E. Rimmer of Lodi, California. This truck is on the job 20 hours a day and has run over 600,000 miles.

1934 131½-inch Ford V-8 Tractor owned by Petroleum Carrier Corporation of Jacksonville, Florida. 626,000 miles and still going strong.

HERE is proof of spectacular truck performance. Not many trucks could do what these have done. Yet few Ford Truck owners will be surprised—even at this astonishing record. The man who owns or drives a Ford knows, better than any one, that for stamina and dependability it stands alone.

The units you see here, like all Ford Trucks and Commercial Cars, were built to the highest standards of quality in design, materials and workmanship. That, with the Ford Engine and Parts Exchange Plan, is the reason they were able to achieve their remarkable service record.

1939 Ford Trucks and Commercial Cars are better built than ever to give reliable, low-cost service over thousands of miles in every hauling and delivery field. There are 3 V-8 engines, 6 wheelbases, 42 body and chassis types (including cab-over-engine models) to choose from. See any Ford dealer for an "on-the-job" test.

Ford Motor Company, builders of Ford V-8 and Mercury Cars, Ford Trucks, Commercial Cars, Station Wagons and Transit Buses.

FORD V·8 TRUCKS AND COMMERCIAL CARS

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Dayton Oil Gas Process for Making Low B.t.u. Gas

Could you inform us about the essential features of the Dayton oil and gas process, a method of converting oil into a gas suitable for burning, having a 450 B.t.u. value at 90 per cent thermal efficiency?—C. S. F.

The Dayton oil and gas process has frequently been described in the literature. The discussion following is abstracted from the article by Hugh E. Ferguson:

The original patent relates to the manufacture of gas from oil and air, the two being mixed in a proportion that will insure partial combustion. The combustion is started in a heated retort and then continues, being controlled by the quantity of air introduced. The products are gaseous hydrocarbons and tar or free carbon. The carbon combines with some of the cxygen from the introduced air (or combustion supporting gas) and the heat of combustion heats the retort. Heat exchange of the exit gas and incoming mixture of air and oil vapors is an important part of the process.

The oils utilized are of the gas oil type, between 30° and 40° A.P.I. gravity and distilling between 300° and 700° F. The oils must have a viscosity low enough to insure effective atomization by preheated air and contain no solid material to clog the orifices. Extremely low sulfur content is not essential.

The older Dayton process plants used disc-shaped retorts, initially raised to 1,400°-1,600° F., having a maximum capacity of 3,300 cu. ft. per hour of 450 B.t.u. One gallon of oil with 175-185 cu. ft. of air yields 225-230 cu. ft. gas and 0.05 to 0.07 gal. of tar. Improved generators have been built with capacities up to 42,000 cu. ft. per hour, operating without external heating. The conditions when making a 450 B.t.u. gas are shown in the table.

DAYTON OIL GAS MADE IN IMPROVED GENERATORS

Generator temp., °F.	1,425
Gas analysis—	Vol. pct.
Carbon dioxide	5.9
Illuminants	14.5
Oxygen	0.5
Carbon monoxide	7.2
Hydrogen	2.5
Methane, etc.	7.6
Nitrogen	61.8
Specific gravity	1.02
Oil 38° A.P.I. gravity, gal. per M. cu. ft.	4.10
Production gas, cu. ft./gal.	184
Cu. ft. oil gas/gal.	60
Efficiency, per cent	80

A modification known as the Dayton and Taber has been introduced for reforming natural gas.

Reference: Hugh E. Ferguson, The Present Status of the Dayton Oil Gas Process, Gas Age Record, June 7, 1930, p. 849.

Benzol Mixtures Used for Testing Antiknock Rating of Gasoline

What is the benzol mixture that is reported to be satisfactory for determining by test the octane rating of gasoline? If this is a satisfactory practice, what is the octane rating of the mixtures that are required?—M. A. W.

Mixtures of benzol and gasoline, or heptane, may be prepared for knock testing references but they must be standardized against octane-heptane mixtures or fuels that have been prepared by comparison with known blends.

A mixture containing 68 per cent of 1° benzene and 32 per cent normal heptane is utilized for comparison under test conditions, with a blend composed of 65 per cent isooctane and 35 per cent normal heptane. This is utilized for what may be termed an engine inspection test. If these mixtures do not match by engine test, when all other test requirements have been satisfied it is concluded that the mechanical conditions of the test engine are not correct.

One degree of benzene is the product having a boiling range not greater than 1° C. of chemically pure benzene. The specific gravity should fall between 0.882 and 0.886. The product should be free from hydrogen sulfide, carbon disulfide and thiophene. There should be no turbidity, with the maximum color equal to 3 mg. per l. of potassium dichromate water solution.

The name benzol is usually applied to the commercial benzene, when the pure product is intended, it is proper to use the word benzene.

The standard A.S.T.M. knock test requires that definite engine condition shall be maintained. The details may be found in the description of the method.

Reference: Knock Characteristics of Motor Fuels, A.S.T.M. Standards on Petroleum Products and Lubricants, p. 158, 1938.

Physical and Chemical Laws and Principles Used in the Petroleum Industry

Dalton's Law of Partial Pressures

(Total pressure is sum of individual pressures)

When there are several gaseous elements or compounds present in a gas mixture each pure gas influences the pressure to the same extent as if an equal quantity of the gas were held in the space by itself. Therefore, the total pressure of a gas mixture is the sum of the separate pressures of the gases in the proportion in which they are present.

Example—A gas mixture contains 30 per cent A and 70 per cent B at 760 mm. The partial pressure of each is:

$$\frac{30}{100} \times 760 = 228 \text{ mm. for A}$$

$$\frac{70}{100} \times 760 = 532 \text{ mm. for B}$$

Export Aviation Gasoline for Delivery to English Ports

What are the fundamental requirements covering the quality of aviation gasoline of export grade? Are there standard specifications for this kind of gasoline which are generally recognized both in England and the United States?—S. L. E.

There is no standard grade of aviation gasoline recognized in the export trade comparable with the well established U. S. Government Motor gasoline, which is commonly used as a foundation for making specifications. The practice is to sell the product on specifications which have been prepared and agreed upon by the purchaser and seller. It may be of some assistance to consider the two specifications for aviation gasoline in the table, which have an official standing in England.

BRITISH SPECIFICATIONS FOR AVIATION GASOLINE

			Great Britain	International Air Traffic Assn.
Specification number			DTD 230	3
Octane No., min. Motor Method			87	87
Distillation:	°C.	°F.	Per cent	Per cent
Recovery to	75	167 min.	10	10-20
	100	212	50	50
	150	302	90	90
F.B.P., maximum			180° C. (356° F.)	180° C. (356° F.)
Recovery, minimum, per cent			96	97
Loss, maximum			2	2
Vapor pressure, maximum			7 lbs./sq.in.	500 g./sq.cm.
Freezing point, maximum			—60° C. (—76° F.)	—50° C. (—58° F.)
Specific gravity at 15° C.			0.79 max.	0.720 to 0.790
Gravity, A.P.I.			47.6	65 to 47.6
Total sulfur, per cent weight, maximum			0.15	0.1
Corrosive sulfur, maximum			1 mg./100 ml.	.....
Free sulfur by copper strip			Negative	Negative
Gum by glass dish, maximum			10 mg./100 ml.	0.01 g./100 ml.

The requirements that are always stressed include octane rating, volatility, gravity and purity.

There are several factors which are more important as relating to the performance quality of aviation gasoline than to the good grades of motor fuel. The product must be more volatile, the octane rating higher, freezing point must be low enough to withstand the extreme flying temperatures, specific gravity is especially important when the gasoline is to be used for long-distance flights.

Composition of the Different Forms of Brass Used in Exchangers, Etc.

Can you give me the composition of the several varieties of brass used in exchangers, bearings, etc.? Is naval brass and Admiralty metal the same thing under different names?—C. N. I.

Brass is made in a number of percentages of the metals copper and zinc, with a few containing tin in addition. The composition of the better known types of brass is shown in the table.

COMPOSITION OF BRASSES—NUMBERS ARE PER CENT

Name—	Copper	Zinc	Tin
Admiralty metal	70	29	1
Muntz metal	60	40	..
Naval brass	60	39	1
Red brass	85	15	..
White brass	10	80	10
Yellow brass	66	44	..

Admiralty metal and naval brass are similar in that they contain the three metals, copper, zinc, and tin, but naval brass contains 10 per cent less copper and 10 per cent more zinc than the Admiralty metal.

FIELD OPERATIONS

Summarizing the Week's Developments

ILLINOIS—A wildcat in Section 19-5s-3e, Franklin County, which pumped 199 bbl. of oil from a St. Louis lime pay, adds a producing county to the state's list. Production in the basin fields continued on the increase.

KANSAS—Hartman & Blair opened an Arbuckle lime pool in Section 21-31-4, in Cowley County. The same firm and its associate completed two big wells in the Hittle pool in Cowley County. The Haferman pool in Rice County was extended westward; the Stoltenberg pool in Ellsworth County was extended southwesterly, and a new pool was opened in Section 27-19-10w, Rice County, by a 300-bbl. well. The Barnhart pool in McPherson was extended into Rice County.

OKLAHOMA—The Pure Oil Co. opened a pool in Section 33-3s-1e, Carter County, northeast of the old Healdton pool. The well produces from Woodford shale. Nels Burton and others' wildcat in Section 16-9n-2w, Cleveland County, while not yet completed, flowed 100 bbl. of oil naturally in 10 hours.

LA-ARK-TEX—A number of wildcats in North Louisiana are being given drill-stem tests or production tests. The Magnolia field in Arkansas has prospects of an eastern extension. The opening of distillate production in the Paradis district, St. Charles Parish, was the feature in the southern Louisiana area.

TEXAS: Gulf Coast—The Martha area in Liberty County has good promise of a new pool, a wildcat of Stanolind Oil & Gas Co. having flowed at the rate of 400 bbl. of fluid per day, 70 per cent high-grade oil. A new sand was opened for production in the West Ranch field in Jackson County.

West Texas—The continued extensions of the Wasson-Denver-Bennett fields give strength to the belief that they comprise one great field of 53,000 acres, while the Slaughter field extensions have spread that field to 17,112 acres. All the above fields are in Yoakum County. A 4,400-bbl. well was completed in the Tubbs pool in Crane County. Two gas wells in Moore County in the Panhandle produced 49,000,000 cu. ft. and 43,000,000 cu. ft. per day, respectively.

West Central Texas—"In between" wells are rapidly linking the Avoca and the Griffin pools in Jones County. They are now only 1¼ miles apart.

North Texas—The Sikes pool and the Hull-Silk pool in Archer County were given bright promise of extensions by outposts nearing completion. Three wildcats have been started in Clay County.

Southwest Texas—A wildcat in the Woodsboro area in Refugio County was dry and abandoned at 6,500 ft. Drilling in the McCampbell field is expected to slow up owing to curtailment of pipe line runs. Two deep tests in the Rio Grande Valley were abandoned as dry at 9,016 ft. and 7,579 ft., respectively.

MICHIGAN—The best well of the week was completed in the Kent County field. It was rated at 7,440 bbl. per day. Another in the same county was rated at 2,460 bbl. per day. Twenty new oil wells increased potential production 17,250 bbl. per day. A 1,000-bbl. well was completed in the Salem pool.

CALIFORNIA—Richfield Oil Corp. has acquired a block of 50,000 acres of leases in southern end of the San Joaquin Valley. This big block is in for an extensive program of geological and geophysical exploration and core-drilling. A well not far from the edge of the block is now in an oil sand at 11,004 ft.

Completions in All Fields

(Week Ending July 1, 1939)

	Oil	Gas	Dry	Total	1939 total comp. to date	1938 total comp. to date
N. Y., Pa., and W. Va.	44	15	6	65	1,536	1,988
Ohio	3	8	6	17	466	469
Indiana	3	0	2	5	111	42
Kentucky	10	0	9	19	315	405
Illinois	61	0	14	75	1,714	554
Michigan	20	2	10	32	651	410
Kansas	16	0	4	20	581	869
Oklahoma	17	1	9	27	906	900
Texas:						
North Central Texas	36	0	23	59	1,195	1,584
West Texas	35	1	2	38	931	1,143
Texas Panhandle	6	4	0	10	192	319
East Texas	10	0	0	10	258	1,105
East Central Texas	2	1	1	4	129	183
East Texas Border	1	0	0	1	35	83
Gulf Coast Texas	23	0	4	27	684	649
Southwest Texas	32	0	13	45	1,182	1,078
Total Texas	145	6	43	194	4,606	6,144
North Louisiana	6	1	3	10	262	320
Gulf Coast Louisiana	14	2	3	19	294	243
Total Louisiana	20	3	6	29	556	563
Arkansas	1	0	1	2	121	126
Montana	3	0	1	4	70	42
Wyoming	0	0	0	0	45	80
Colorado	0	0	0	0	4	5
New Mexico	7	0	1	8	297	283
California	12	0	2	14	460	673
Total United States	362	35	114	511	12,439	13,553
Total previous week	350	32	103	485		
Week ending July 2, 1938	336	18	108	462		

Outstanding Fields—Highlights

(Week Ending July 1, 1939)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	26	50	7	4,512	1,031	24,700
Wasson-Bennett	21	54	9	7,702	322	15,428
Ector County	25	51	15	15,830	1,745	41,297
Pecos County	16	36	3	278	1,148	30,475
Jones County	12	24	4	3,216	510	8,396
East Texas	10	29	10	610	25,934	372,798
OKLAHOMA						
St. Louis	5	34	8	1,319	854	37,250
KANSAS						
Barton County	2	8	1	495	434	17,185
Ellis County	5	12	1	1,200	392	8,818
Rice County	3	17	2	361	1,342	30,716
Russell County	4	37	3	507	1,257	23,338
NEW MEXICO						
Lea County	6	59	6	975	2,166	106,950
LA-ARK-TEX						
Cotton Valley, La. (deep)	0	9	0	0	131	11,495
Magnolia, Ark.	0	15	1	525	34	10,170
MICHIGAN						
Freeman-Redding	3	22	1	1,060	1,060	13,849
Kent County	5	23	5	10,450	61	7,237
CALIFORNIA						
Wilmington	5	21	3	822	646	80,750
ILLINOIS						
Salem field	6	89	27	8,431	1,017	140,110
Louden field	5	76	14	2,766	922	44,015
Other basin fields	28	190	20	5,736	1,409	52,690
Old fields	....	.....	....	.....	13,500	7,250

Illinois and Kentucky

By STAFF CORRESPONDENT

Gulf Oil Corp. Opens Pool; State Production Increases

Illinois maintained its pace of recent months with 75 completions last week, 61 of them oil wells; a decrease of 1 in the total completions was noted compared to the preceding week but the successful oil tests remained the same. Production in the state jumped to an average of 244,065 bbl. daily, with Salem accounting for 140,110 bbl., Louden 44,015 bbl., and the balance of the new fields 59.740 bbl. Salem jumped its production 8,900 bbl., Louden decreased its daily average 100 bbl., but the other new areas in the state increased 10,381 bbl. Nearly all of the new work in the area was concentrated in the larger fields although there were nine new wildcat locations reported.

A total of 16,933 bbl. of new production was added by initial tests on last week's completions, Salem leading with 27 completions for 8,431 bbl., Clay County second with 6 wells and 3,798 bbl., and Louden third with 14 wells and 2,766 bbl. Two successful completions were chalked up in the St. James pool, two in Richland County, seven in Wayne County, two in Washington County, and one in Wabash County. A salt water disposal well was completed in Clinton County.

Evidence that some of the pressure was going from the McClosky zone in the Salem field is seen in the initial gages of the new wells, a well just short of 2,000 bbl. having been the largest completion of the week. It was the Texas Co. No. 12 G. Chapman, SE SW SW Section 28-2n-2e, which flowed 1,911 bbl. from the McClosky at 1,951-83 ft. after being acidized with 3,000 gal. The average completion for the field was 312 bbl. initial production. The field passed the 1,000 mark in the number of wells producing, a total of 1,017 being completed to the end of last week.

The largest well in the Louden field was Carter Oil Co. No. 2 Joe Tipsword, SE NE SW Section 14-8n-3e, which was completed in both the Bethel and Cypress for an initial of 696 bbl. and 250,000 cu. ft. of gas. The average initial in the Louden field was 197 bbl. Carter Oil Co., major operator in the field, indicated it was curtailing development work with most of its offset obligations discharged.

The 13 completions in Clay and Wayne counties show that interest in that area is not waning. Pure Oil Co. had the outstanding well in the area, its No. 4 Clay City Banking Co., C E½ NE NE Section 7-2n-8e, flowing 1,023 bbl. naturally through tubing from the McClosky at 3,057-61 ft. and 3,079-85 ft. The wells in Wayne County were not so large, the seven totaling 1,117 bbl. initial production. Most of the 16 outpost tests in Wayne County were nearing completion.

Interest was centering on Wabash County where nine test wells were nearing completion with prospects that four of them in Section 30-2s-13w might be oil wells. In Section 30-2s-10w, Bartlett No. 1 Gray, NW NW SE, flowed 363 bbl. in 10 hours from the Cypress sand but the well is not yet completed. The Continental Oil Co. and the Superior Oil Co. have leased the Antioch Christian Church property of 1½ acres in the NW NW Section 30-2s-13w, Wabash County, for $2,000 cash and $6,000 in oil produced from offset properties. The major companies hope to prevent an orgy of small-plot drilling in the Wabash County field.

Franklin County gave indications of uncovering new production with the testing of the Gulf Oil Corp. and others No. 1 Hinman, a wildcat in Section 19-5s-3e. The well pumped 199 bbl. of oil and some water from a total depth of 3,068 ft., in St. Louis lime; the base of the McClosky was placed at 2,878 ft. Operators were continuing to test.

The city commission of Centralia authorized the hiring of Earl C. Jupin, Centralia, as a special royalty gager in the Salem field; with a representative of the Texas Co., he will be responsible for the accounting of the production from under Centralia city property and will make a monthly report. The commission pointed out that it was protecting the public interest by having its own records although it believed it had been paid for all of the royalty interest in the oil run from leases.

The new Devonian discovery north of Sandoval in Marion County continued to test last week in the additional tankage being installed. Offsets are waiting until the extent of the discovery may be evaluated.

No drilling has been done in the middle of Lake Centralia but Texas Co. owns the leases and will recover the oil from under the lake by directional drilling, it was indicated last week with the near completion of its No. 31 City of Centralia. The well was drilled at an angle of approximately 14° and the bottom of the hole is nearly 300 ft. horizontally from the top. The well is bottomed at 1,853 ft. and will make about 250 bbl. daily. Prevention of pollution of the lake is important as it is the water supply for the city of Centralia. The state sanitary board approved the whipstocking procedure.

Illinois Fields

HIGHLIGHTS OF THE WEEK: Gulf Oil Corp. opens a pool in Franklin County in Section 19-5s-3e. The well pumped 199 bbl. of oil and some water from St. Louis lime pay. Directional drilling to penetrate the pay beneath Lake Centralia, the city of Centralia's water supply, was successful. The hole was at an angle of 14° and the bottom is 300 ft. horizontally from the top. Evidence that pressure in the McClosky lime is dropping is seen in wells in that formation in the Salem field. Production continued on the increase.

Daily average production of new fields 236,815 bbl.; old fields, 7,250 bbl.; total, 244,065 bbl.

Total operations including locations, rigs and wells drilling, 437.

Completions in Illinois

In Coles County, Perry Miller and Nash No. 1 A. S. Ingram, C W½ NW NW Section 16-11n-10e, abandoned at 743 ft.

In Cumberland County, Manlion Oil Co. No. 1 Wilson, NW NE NE Section 23-10n-10e, was abandoned after rigging up machine.

In Fayette County, Carter Oil Co. No. 2 Gerald Miller, NE NW NE Section 11-8n-3e, in the Louden field, Stray sand 1,532-49 ft., shot with 40 qt., pumped 150 bbl. Carter Oil Co. No. 2 Joe Tipsword, SE NE SW Section 14-8n-3e, Cypress 1,471-1,517 ft., Bethel 1,581-90 ft., plugged back to 1,505 ft., 40-qt. shot, drilled to 1,591 ft., total depth, flowed 696 bbl. through tubing, and estimated 250,000 cu. ft. of gas. Whisenant and others No. 12 Lilly, NW SE SW Section 16-8n-3e, Cypress sand 1,454 ft., sand 1,489-1,507 ft., 40-qt. shot, flowed 125 bbl. Whisenant and others No. 13 Lilly, NW SE SW Section 16-8n-3e, Cypress 1,453 ft., sand 1,486-1,507 ft., stray 1,556-88 ft., 40-qt. shot, flowed 250 bbl. Carter Oil Co. No. 5 J. T. Wright, NE NE NW Section 21-8n-3e, Cypress 1,481-1,514 ft., stray 1,557-81 ft., 40-qt. shot 1,569-81 ft., acidized removable pipe at 1,484-98 ft., 10-qt. shot and 40-qt. shot, flowed 216 bbl. and 100,000 cu. ft. of gas. Carter Oil Co. No. 1 Joe Kline, NE NW NE Section 23-8n-3e, Cypress 1,494-1,556 ft., stray 1,580-83 ft.. plugged back 1,532 ft. and flowed 420 bbl. Carter Oil Co. No. 1 Earl Tucker, SW NW NE Section 27-8n-3e, Cypress 1,492-1,531 ft., stray 1,656-69 ft., Bethel 1,580-94 ft., 20-qt. shot in Bethel and 10-qt. shot in stray, disposed of removeable pipe and pumped 180 bbl. Carter Oil Co. No. 1 Mac Durbin, SE NE NE Section 28-8n-3e, Cypress 1,389-1,448 ft., Bethel 1,483-1,520 ft., 40-qt. shot, swabbed 316 bbl. Carter Oil Co. No. 3 Orville Mills, NE NW SW Section 28-8n-3e, stray 1,518-35 ft., Bethel 1,559-68 ft., flowed 24 bbl. from both zones.

Carter Oil Co. No. 7 M. J. Griffith, NE NW NE Section 31-7n-3e, Cypress 1,518-33 ft., 40-qt. shot, swabbed 184 bbl. Stewart Oil Co. No. 5 McPheeters, NW SW SW Section 28-7n-3e, Cypress 1,547 ft., sand 1,577-89 ft., 40-qt. shot, pumped 70 bbl. of oil and 8 bbl. of water. W. B. Johnson Drilling Co. No. 2 Arnold, NW SW NE Section 19-7n-3e, Cypress sand 1,537-58 ft., shot with 30 qt., pumped 42 bbl. Carter Oil Co. No. 6 Ola Harper, NE NW SW Section 17-7n-3e, Cypress 1,656-76 ft., 20-qt. shot, swabbed 65 bbl. Texas Co. No. 2 Patterson, SE SE NE Section 13-7n-2e, Cypress sand 1,543-66 ft., shot with 10 qt., pumped 28½ bbl. in 3 hours. Giffert Drilling Co. No. 1 Garner, SE NW NE Section 25-6n-2e, abandoned at 1,615 ft., Cypress sand at 1,594-1,615 ft. Ohio Oil Co. No. 2 Rush, C N½ NW SW Section 30-6n-3e, Cypress 1,537-57 ft., 3-qt. shot, pumped 185 bbl. Shulman Brothers No. 4 Combs, C N½ NW SW Section 6-6n-3e, Cypress 1,536-40 ft. and 1,547-65 ft., 40-qt. shot, pumped 300 bbl.

In Richland County, Pure Oil Co. No. 1 Bessie Veit, SW SW SW Section 23-4n-9e, Fredonia 2,912 ft., plugged back and drilled out to 2,116 ft., pumped 65 bbl. of oil and 62 bbl. of water. Charles Skinner and others No. 1 School lot, SW NW SW Section 23-4n-10e, McClosky 3,025-34 ft., acidized with 6,000 gal., pumped 72 bbl. of oil and 3 bbl. of water.

In Marion County, W. C. McBride, Inc., No. 1 W. Gross, SE SE NE Section 33-3n-2e, McClosky 2,198-2,208 ft., St. Louis 2,299 ft., dry and abandoned. Miller and others No. 1 K. M. Beal, SW SE NW Section 34-3n-3e, cored from 1,410 ft. without any pays and was abandoned in the McClosky at 2,277 ft., total depth.

Max Pray No. 5 Cole, SE NW SE Section 16-2n-2e, Salem pool, McClosky 2,060 ft., acidized with 8,000 gal., pumped 50 bbl. Magnolia Petroleum Co. No. 40 G. H. Young, NE NE SE Section 28-2n-2e, Benoist 1,753 ft., Aux Vases 1,811 ft., 60-qt. shot in both formations, flowed 480 bbl. Ohio Oil Co. No. 12 Mathew Young Heirs, SW SE SW Section 20-2n-2e, Benoist 1,792 ft., Aux Vases 1,862 ft., 20- and 40-qt. shot, flowed 313 bbl. in 7 hours. Shell Oil Co. No. 8-A Salem State Bank, Fredonia 1,911 ft., McClosky 1,939 ft., 1,000 gal. acid, flowed 551 bbl. Shell Oil Co. No. 5-A Young Heirs, NW SE SE Section 20-2n-2e, McClosky top at 1,937 ft., acidized with 1,000 gal., flowed 510 bbl. Magnolia Petroleum Co. No. 22 D. A. Shanafelt, NW NW NW Section 21-2n-2e, McClosky in streaks from 1,994 ft. to 2,057 ft., 2,000 gal. acid, flowed 786 bbl. Magnolia Petroleum Co. No. 42 G. H. Young, SW SW NW Section 28-2n-2e, McClosky 1,904-62 ft. in streaks, acidized with 3,000 gal. and flowed 1,040 bbl. Texas Co. No. 11 J. Chapman, SE NW SW Section 28-2n-2e, Benoist 1,743 ft., Aux Vases 1,813 ft., shot with 25 qt. and 35 qt., flowed 117 bbl. in 3 hours. Texas Co. No. 12 G. Chapman, SE SW SW Section 28-2n-2e, McClosky 1,951-83 ft., acidized with 3,000 gal., flowed 1,911 bbl. Texas Co. No. 9 Lee, NW SW SW Section 28-2n-2e,

Benoist 1,718 ft., Aux Vases 1,789 ft., shot with 50 qt. and 20 qt., flowed 43 bbl. in 3 hours. Texas Co. No. 12 N. Lee, SW SW SW Section 28-2n-2e, McClosky 1,946-63 ft., acidized with 3,000 gal., flowed 280 bbl. in 3 hours. Texas Co. No. 15 Lee, SE NE NE Section 32-2n-2e, McClosky 1,958-97 ft., flowed 386 bbl. in 3 hours. Texas Co. F. W. Richardson, SW NE SW Section 32-2n-2e, Benoist 1,696 ft., flowed 85 bbl. in 3 hours. Baldwin No. 6 Holmes, NE SW NE Section 33-2n-2e, McClosky 2,025 ft., 1,000 and 2,000 gal. acid, pumped 235 bbl. Baldwin No. 7 Holmes, NE SW NE Section 33-2n-2e, McClosky 2,018 ft., acidized with 3,000 gal., pumped 250 bbl. Ohio Oil Co. No. 16 Lloyd, SE NW NE Section 33-2n-2e, McClosky 2,014-60 ft., acidized with 2,000 gal., pumped 49 bbl. in 12 hours. Ohio Oil Co. No. 17 Lloyd, SE NW NE Section 33-2n-2e, McClosky 2,017-80 ft., acidized with 2,000 gal., pumped 95 bbl.

Texas Co. No. 2 E. Snyder, NW SW NE Section 16-1n-2e, McClosky in streaks from 2,134 ft. to 2,160 ft., acidized with 1,000 gal. and pumped 22 bbl. in 3 hours. Texas Co. No. 6 J. Williams, SW NW NW Section 9-1n-2e, McClosky 2,048-65 ft. in streaks, acidized with 3,000 gal. and pumped 84 bbl. in 3 hours. Texas Co. No. 34 City of Centralia, NW NE NW Section 9-1n-2e, Benoist 1,840 ft., pumped 30 bbl. in 3 hours. Texas Co. No. 33 City of Centralia, SW NW NW Section 9-1n-2e, McClosky 2,042-67 ft., acidized with 3,000 gal., pumped 93 bbl. in 3 hours. Texas Co. No. 10 Bryant, NW SW NW Section 9-1n-2e, McClosky 2,065-70 ft., pumped 42 bbl. in 3 hours. Texas Co. No. 7 E. L. Snider, SW SW SE Section 8-1n-2e, Benoist 1,887 ft., pumped 31 bbl. Texas Co. No. 19 O. Johnson, NW SW SW Section 5-1n-2e, Aux Vases 1,780 ft., total depth 1,850 ft., and pumped 12 bbl. in 3 hours. Texas Co. No. 16 O. Johnson, SE SW SW Section 5-1n-2e, McClosky 1,937-54 ft., flowed 896 bbl. Bell Oil Co. No. 1 Albert, NE NW NW Section 3-1n-2e, McClosky 2,101-05 ft., acidized with 1,000 gal., pumped 20 bbl. of oil and 15 bbl. of water. Texas Co. No. 4 G. Carnell, SE SE NE Section 6-1n-2e, Benoist 1,732 ft., Aux Vases 1,770 ft., and pumped 10 bbl. from total depth of 1,882 ft.

In Clay County

Pure Oil Co. No. 3 Clay City Banking Co., C W½ SE SE Section 6-2n-8e, Fredonia at 3,012 ft. and pays at 3,018-23 ft., 3,027-30 ft., and 3,107-12 ft., acidized with 5,000 gal., flowed 511 bbl. Pure Oil Co. No. 4 Clay City Banking Co., C E½ NE NE Section 7-2n-8e, Ste. Genevieve 2,965 ft., Fredonia 3,000 ft., shows of oil at 3,057-61 ft. and 3,079-85 ft., 1,023 bbl. through tubing, natural flow. Pure Oil Co. No. 1 Sal Smith B, C E½ SE NE Section 7-2n-8e, Fredonia 2,993 ft., pays at 2,994-3,004 ft. 3,008-12 ft., and 3,015-26 ft., 500 gal. acid, flowed 740 bbl. in 17½ hours. Pure Oil Co. No. 2 Sal Smith B, C E½ NE SE Section 7-2n-8e, Fredonia 2,989 ft., pays at 2,990-92 ft. and 2,998-3,001 ft., had 400 ft. of oil in the hole, acidized with 5,000 gal., flowed 643 bbl. Pure Oil Co. No. 9 Leon Clark, C W½ NW SW Section 8-2n-8e, Fredonia 2,989 ft., pay 2,990-97 ft., 3,009-12 ft., and 3,023-27 ft., and show at 3,024-93 ft., acidized with 5,000 gal., flowed 384 bbl. in 17 hours Pure Oil Co. No. 11 T. H. Tetrick, C E½ SW NE Section 9-2n-8e, Fredonia 2,960 ft., pay 3,007-12 ft. and 3,015-18 ft., acidized with 5,000 gal., swabbed and flowed 95 bbl. in 25 hours, pumped 197 bbl.

In Wayne County, Pure Oil Co. No. R. E. Fitch, C N½ SW NE Section 10-1n-8e, Fredonia 3,086 ft., pay 3,101-32 ft., acidized with 2,000 gal. and pumped 49 bbl. of oil and 162 bbl. of water. Pure Oil Co. No. 2 E. A. Keith A, C W½ NE NW Section 34-1n-7e, Cypress 2,710 ft., Ste. Genevieve 3,138 ft., Fredonia 3,089 ft., pay 3,100-26 ft., perforated 5½-in. casing at 2,990-95 ft. with 60 shots, flowed 179 bbl. Pure Oil Co. No. 2 Effie Brown, C E½ SE NE Section 22-1n-7e, Fredonia 3,128 ft., pay 3,138-91 ft., perforated 116 shots at 3,138-48 ft., acidized with 1,000 gal., and pumped 31 bbl. of oil and 8 bbl. of water. D. Davis No. 2 Carlson, SW SW SW Section 34-1s-7e, McClosky 3,240-47 ft., acidized with 1,000 gal. and reacidized with 1,500 gal., flowed 178 bbl. in 14 hours and died; put on the pump it made 256 bbl. D. Davis No. 2 C. F. Sprague, C N½ SE SE Section 33-1s-7e, Fredonia 3,247 ft., pay 3,248-56 ft., flowed 392 bbl. in 4 hours through 4-in. choke. Carl Robinson and others No. 2 Joe Felix, C W½ NW SW Section 26-2s-8e, abandoned at 3,496 ft. Pure Oil Co. No. 1 Marie Hornbuckle, C W½ NW SE Section 19-2n-8e, Fredonia 3,002 ft., pay 3,018-23 ft., 3,028-30 ft., total depth 3,097 ft., acidized with 5,000 gal., pumped 62 bbl. of oil and 273 bbl. of water. Pure Oil Co. No. Mary Clarke Hale, C S½ SE SW Section 19-2n-8e, Fredonia 3,007 ft., pay 3,020-25 ft. and 3,028-32 ft., acidized with 5,000 gal., and pumped 148 bbl.

In Wabash County, Clyde Washburn No. 1 Pfeifer, SW SW SW Section 13-1s-13w, Tar Springs 1,940 ft., Cypress 2,263 ft., Benoist 2,385 ft., McClosky 2,556 ft., total depth 2,580 ft.; plugged back to 1,930 ft. and drilled out to 1,955 ft., shot with 10 qt. and 20 qt. and pumped 48 bbl.

In Clinton County, Shell Oil Co. No. 1 Allison, C S½ NW SE Section 12-1n-1w, completed at 720 ft. in sand for a salt water disposal well. Webb and others No. 1 William Hussman, NE NE SE Section 12-1n-2w, dry and abandoned at 1,600 ft. in St. Louis lime. Paul Mosevach No. 1 John Sehenel, SE SE SE Section 6-1n-3w, total depth 1,027 ft., in Cypress sand, with show of dead oil, made 7 bbl. of water per hour and was abandoned.

In Washington County, Shell Oil Co. No. 7 Holston, NW NW NE Section 22-3s-3w, Benoist 1,261 ft., total depth 1,286 ft., shot with 21 qt., pumped 74 bbl. W. R. Curry No. 1 P. and W. Krughoff, SE NW NW Section 10-3s-3w, Benoist 1,286-1,305 ft., dry and abandoned. Monitor Oil Co. No. 3 Kurwicki Roadway, NW NE NE Section 22-3s-3w, Benoist 1,272 ft., shot with 10 qt. and pumped 77 bbl.

In Saline County, Kingwood Oil Co. No. Ezbar Allyn, SW SW NE Section 11-9s-7e, Fredonia 2,700 ft. and St. Louis 2,874 ft. The well was abandoned at a total depth of 3,045 ft.

In Montgomery County, R. E. Johnson No. 1 Fuller, SW SW NW Section 7-7n-2w, abandoned at 700 ft. Saliday and Sanis No. 1 Moon, NE NE SW Section 11-7n-3w, abandoned at 1,065 ft.

New Wildcat Operations

In Edgar County, Burkitt and Denson Oil Co. No. 1 W. J. Baum, SW NW NE Section 12-16n-14w, cable tool test, set 258 ft. of 8-in. casing and was drilling at 260 ft.

In Coles County, East Oakland Syndicate No. 1 W. J. Temple, SW cor. SW SE NE Section 36-14n-10e, cable tools, drilling at 1,400 ft.

In Clark County, Patmin Production Co. No. 1 Ingersoll, NW SW SE Section 29-11n-14w, spudding with cable tools. George B. Scherrit No. 1 S. Turner, SE SW NW Section 14-11n-14w, a rotary test, to the St. Peter; derrick up. Jinks Oil Co. No. 1 W. A. Johnson, SW NW NW Section 36-10n-14w, a cable tool test, was drilling at 230 ft.

In Montgomery County, W. M. Meyers No. 1, SE SE NE Section 29-9n-2w, spudded with cable tools and shut down.

In Shelby County, E. E. Goad No. 1 Hoagland, NW NW SW Section 14-9n-4e, moving in material.

In Jasper County, Thompson Drilling Co. No. 1 Union Central Life Insurance Co., C SE SE SE Section 14-8n-10e, a rotary test, set 122 ft. of 10-in. casing, and drilling at 340 ft.

In Madison County, Fred Cary No. 1 J. Hassel, SE SE SW Section 11-3n-9w, a cable tool test.

In Jefferson County W. R. Curry No. 1 H. H. Peterson, SE SE SE Section 23-2s-1e, rotary location; Kingwood Oil Co. No. 1 Woods, C NW NE Section 21-2s-4e, cellar and pits.

In White County Kingwood Oil Co. No. 1 Tullis, C E½ NE NE Section 29-3s-8e, rotary derrick up.

In Perry County W. R. Hays and others No. 1 H. and F. Callens, SE SE SW Section 4-4s-1w, rigging up rotary.

In Gallatin County Kingwood Oil Co. No. 1 Egyptian Fuel & Lumber Co., C N½ NE SW Section 15-8s-10e, rotary location.

In Saline County, Coast Production Co. No. 1 Choisser, NE NW NW Section 5-8s-7e, shut down for orders at 2,043 ft. Hafpenny No. 1 Swinnery, SW SW NW Section 1-9s-7e, shut down at 2,160 ft. Kingwood Oil Co. No. 1 J. Oliver, SW NW NW Section 11-10s-6e, had derrick up.

In Johnson County, Tunnel Hill Oil Co. No. 1 J. Boner, C W½ SW NE Section 30-11s-3e, drilling 1,205 ft., after topping the Tar Springs at 1,175 ft.

In Massac County, Kahle and others No. 1 Harrick, SW SW SW Section 23-14s-3e, fishing at 3,020 ft. Marshall Drilling Co. No. 1 McGhee, NE NE NE Section 30-6s-5e, show of gas 453 ft., show of dead oil 831 ft. and 950 ft., show of oil at 969-70 ft. through hole full of water, rigging up to run casing.

In Franklin County. M. & G. Drilling Co. No. 1 Franklin Realty Co., NE NE SE Section 26-6s-3e, Glen

(Continued on Page 74)

OHIO FIELDS

ZANESVILLE, Ohio, July 3.—The best oil completion of the week in Ohio was a 30-bbl. well in Muskingum County, while the premier gas completion was a 1,150,000-cu. ft. well in Holmes County. A test in Perry County found water in the Clinton, which sand is generally void of any water. An Adams County test has been drilled into the St. Peter horizon.

Athens County, Rome Township, Ohio Fuel Gas Co. No. 1 H. M. Antle, Section 30, gaged 146,000 cu. ft. open flow of gas from the Maxon sand at 928-34 ft. Lodi Township, C. W. Nuzum No. 1 Perry Judson, Section 12, had a small showing of gas in the second Berea; abandoned at 1,635 ft.

Cuyahoga County, Dover Township, William Dempsey No. 1 S. J. Dempsey, Lot 20, found the Clinton sand broken and dry; total depth 2,644 ft.

Guernsey County, Monroe Township, Dr. Hartman No. 5 S. W. Swigert, Section 13, had a small showing of oil in the Berea sand; abandoned at a total depth of 1,292 ft.

Holmes County, Monroe Township, Ohio Fuel Gas Co. No. 1 Alice E. Hart, Section 23, has an open flow of 1,150,000 cu. ft. of gas and flowed 5 bbl. of oil in 8 hours from the Clinton sand at 3,228-70 ft.

Knox County, Union Township, Ridgeway and others No. 1 Charles M. Kaylor, Section 23, was dry in the Clinton sand; total depth 2,985 ft.

Lawrence County, Union Township, Ohio Fuel Gas Co. No. 1 Thomas A. Jenkins, Section 18, is a gas well gaging 300,000 cu. ft. open flow from the Ohio shales; well was shot with 3,000 lb. of gelatin at 2,538-2,990 ft.

Medina County, Chatham Township, Preston Oil Co. had only a trace of Berea sand in the No. 1 Glen Garver test in Lot 5, Fraction 16; abandoned at 434 ft.

Monroe County, Franklin Township, Hines Brothers No. 11 George Hines, Section 32, made 100,000 cu. ft. of gas open flow from the Berea at 1,948-53 ft.

Muskingum County, Union Township, Atha Realty Co. No. 2 Jacob S. Morrison, Section 15, had top of the Corniferous lime at 3,056 ft.; Oriskany sand at 3,154-69 ft., with oil showing at 3,161-67 ft. Hole filled up 1,300 ft. with oil the first 24 hours after shot and is estimated at 30 bbl. a day.

Perry County, Monroe Township, Thistle Oil Co No. 1 Henry Weaver, Section 16, was abandoned after testing in the Clinton. The test proved the sand was yielding twice as much water as oil; total depth 3,780 ft.

Stark County, Lake Township, C. W. White and others No. 1 Howard Werstler, Section 34, gaged 500,000 cu. ft. of gas from the Clinton sand at 4,526-80 ft.

Washington County, Grandview Township, C. E. Uhl No. 9 J. A. Huffman, Section 22, is a small gas well in the Injun sand at 1,627-35 ft. Liberty Township, Burkhart Oil & Gas Co. No. 1 W. J. Hall, Sec-

(Continued on Page 71)

WESTERN KENTUCKY

OWENSBORO, Ky., July 3.—C. E. Daugherty and J. C. Ellis, of Owensboro, have a good well in No. 6 O'Flynn, in the Utica district in Henderson County. It was shot with 160 qt. of nitroglycerin and threw oil, rocks, and debris about 200 ft. into the air. It was the fourteenth oil well in the Utica pool. No. 6 O'Flynn produced from Jett sand at a total depth of 1,169 ft. and while no estimate of its potential was yet available it was said by its owners to be as good as the other wells on the O'Flynn lease. A few miles across the country from the O'Flynn lease the Ohio Oil Co. was completing a well said to be showing 10 bbl. per hour production from the McClosky lime. It is on the Steven Coomes tract.

Altogether in the western Kentucky fields the record of completed work during the week was five oil wells and nine dry holes.

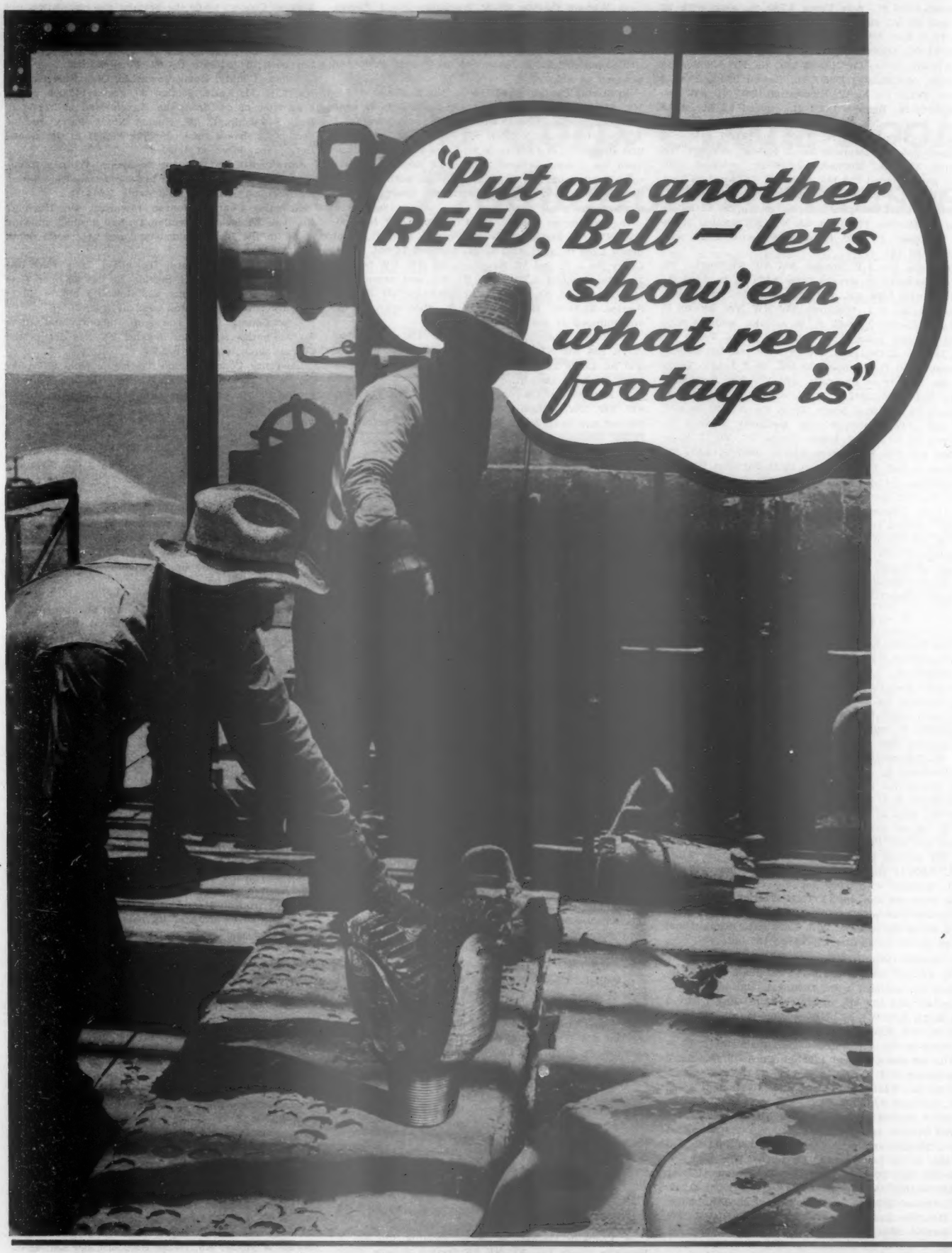
Following were the completions and the new operations:

Breckenridge County, Cloverport district: Charles Near and others No. 2 R. M. Cremshaw, dry hole, total depth 496 ft.

Butler County, Huntsville district: Cumberland Petroleum Co. No. 1 R. Ward, 10-bbl. well in Jones sand, total depth 380 ft.

Daviess County, Thurston district: Snowden & McSweeney No. 1 C. H. Abell, south 100 acres, dry hole, total depth 1,556 ft. Handyville district: Ohio Oil Co. No. 2 Steve Coomes, 10 bbl. per hour natural flow from McClosky sand, total depth 1,820 ft. Utica district: Stewart & Snyder No. 1 Roy Hansford, dry and abandoned at 400 ft. W. Chenault & Farmer No. 2 G. A. Nation, 75-bbl. well in Bariow sand, total depth 1,401 ft. C. E. Daugherty and J. C. Ellis No. 6 Rex O'Flynn, good production in Jett sand. No estimate available. Total depth was 1,169 ft. Two and three-quarters miles

(Continued on Page 83)



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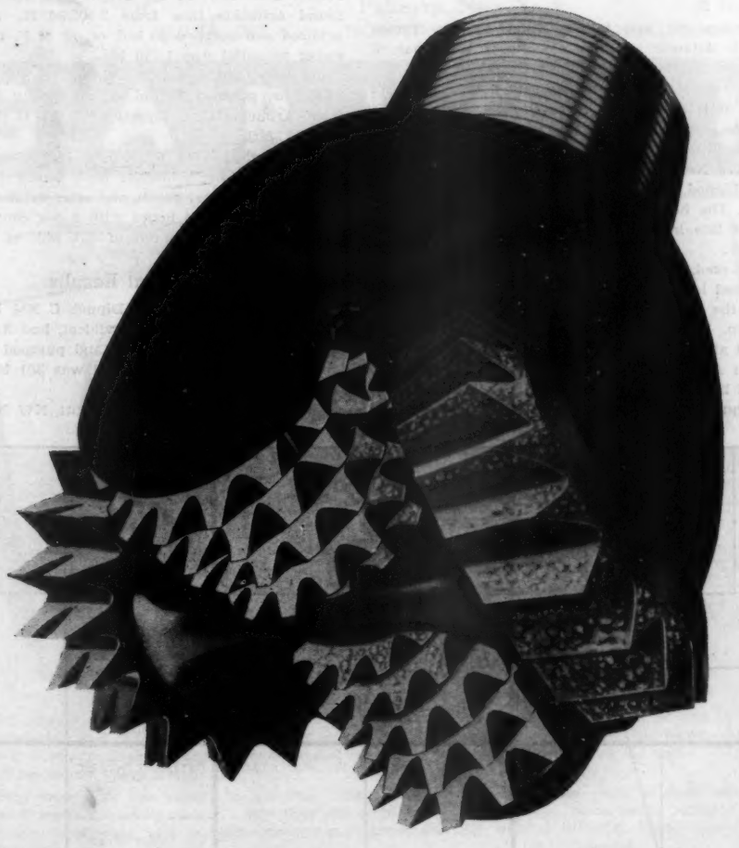

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Kansas Developments

By
DAL DALRYMPLE

New Pool in Cowley County; Two More Big Wells in Hittle

Hartman & Blair and the Tulsa Oil Corp. completed two more big wells in the Hittle pool in Cowley County, Kansas, in the past week. Both were on the Waite farm in Section 21-31-4e. No. 8 Waite was a 250-bbl. per hour producer, rated at 7,107 bbl. per day potentially. No. 9 Waite was rated at 5,985 bbl. a day.

Cowley County will have a new pool with the completion of Hartman & Blair No. 1 Brown, SE SE NW Section 33-30-4e, 4 miles north of the Hittle pool. Arbuckle lime was topped at 3,279 ft. and the hole filled 2,000 ft. with oil in 2 hours. The lime was penetrated only 2 ft., and casing was set on top of the lime late in the week. The well will be given a production test this week. The nearest production is in the David pool, 2 miles east of the new well.

Jock Garden No. 1 F. L. Willard, NW SW SW Section 6-19-9w, in Rice County, extended the Haferman pool ½ mile westward. It was rated potentially as a 295-bbl. well, following an acid treatment in Arbuckle lime at 3,241-63 ft.

The second oil well in the Nunn pool in Finney County is Atlantic Refining Co. No. 1 Gobelman, C NE SE Section 27-21-34w. It was rated at 1,724 bbl. per day from Mississippi dolomite at a total depth of 4,667 ft. It is a south offset to the discovery well.

The Stoltenberg pool in Ellsworth County was extended ¾ mile southwesterly by Atlantic Refining Co. and others No. 1 Loula, NW NW SE Section 28-16-10w. It topped Arbuckle lime at 3,282 ft. and drilled in 10 ft. The hole filled 900 ft. with oil. Casing was being set late in the week and it will be completed this week.

A new pool, which is being called the Dippel pool, was opened last week in Rice County, ¾ mile northeast of the Silica pool. Central Petroleum Co. and others No. 1 Dippel, CNL NE SE Section 27-10-10w, produced at the rate of 301 bbl. per day on its initial test from Arbuckle lime at 3,292-3,313 ft. It also produced 18 bbl. of water.

Three-quarters of a mile southwest of the Doran pool in Rice County, Bradley Oil Co. No. 1 Ruhl, CEL NE NW Section 24-19-10w, found Arbuckle lime top at 3,316 ft. and drilled to 3,352 ft., where salt water broke in. It had not been completed at this writing.

The Barnholt pool in McPherson County was extended into Rice County when C. C. Nelson and Nelson Drilling Co. No. 1 Hodge, NW NW NE Section 25-20-6w, made an initial production of 442 bbl. after having been treated with acid. It had Mississippian chat at 3,304-38 ft. George W. Hinkle No. 1 Peterson, NW SW NW Section 4-20-9w, may link the Coldwater North and the Campbell pools in Rice County. It had Arbuckle lime top at 3,216 ft. and cored saturation to 3,222 ft. Casing was set and rotary was being torn down. It had not been given a production test.

Russell County

Coralena Oil Co. No. 5 Sellens Estate, SE SW SE Section 29-15-13w, in the Trapp pool, Russell County, found Arbuckle lime from 3,303-06 ft., total depth: acidized and pumped 80 bbl. of oil in 11 hours. Echometer potential was 1,940 bbl.

Coralena Oil Co. No. 13 Deines, NE SW NE Section 36-15-14w, pumped 15 bbl. of oil hourly for 5 hours from Arbuckle lime topped at 3,271 ft. Total depth was 3,277 ft.

Phillips Petroleum Co. No. 3 Mollie, SE NW NE Section 35-15-14w, Schneider pool, found the Arbuckle at 3,368-75 ft., total depth, and after acidizing pumped 220 bbl. of oil in 24 hours with 6 per cent water and made echometer potential of 521 bbl. of oil and no water.

Wildcat Results

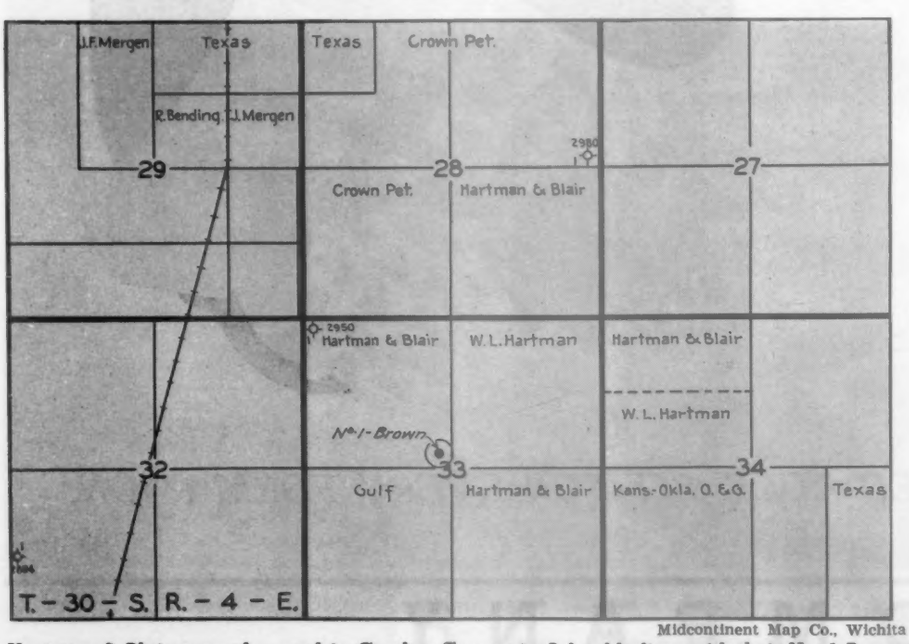
Central Petroleum No. 1 Dippel, C N½ NE SE Section 27-19-10w, Rice County wildcat, had Arbuckle pay at 3,292-3,313 ft., total depth, and pumped 100 bbl. of oil in 8 hours. Initial potential was 301 bbl., plus 18 per cent water.

Cities Service Oil Co. No. 1 Dutt, NW NW SE Section 18-13-14w, Russell County wildcat, found Arbuckle lime at 3,131-34 ft., total depth, and pumped 62 bbl. of oil in a 6-hour test. After acidizing with 1,000 gal. it pumped 80 bbl. in 8 hours with an initial potential of 241 bbl.

E. B. Shawver No. 1-C Hitchcock, C N½ NE NE Section 16-30-1w, Sumner County, had Kansas City lime at 2,945 ft., Mississippi lime at 3,557 ft., and was dry and abandoned at a total depth of 3,625 ft.

Lauck & Moncrief No. 1 Schoonover, SW SW SE Section 20-18-9w, Rice County, was dry and abandoned at 3,304 ft. Lansing lime was topped at 2,903 ft., Arbuckle at 3,271 ft., with no shows.

Lario Oil & Gas Co. No. 1 Link, SE SE SW Section 17-19-9w, had slight saturation in Arbuckle lime at 3,264 ft. but was abandoned at a total depth of 3,285 ft.



Midcontinent Map Co., Wichita

Hartman & Blair opened a pool in Cowley County in Arbuckle lime with their No. 1 Brown in Section 33-30-4. Dolomite was topped at 3,279 ft. and penetrated only 2 ft. The hole filled 2,000 ft. with oil

Estimated Daily Production

Estimated daily production for Kansas for the week ending July 1, and for the preceding week, was as follows:

	Barrels	
	July 1	June 24
Oxford City	875	950
Burrton	9,975	10,100
Ritz-Canton	5,600	5,650
Graber	2,200	2,725
Hollow-Nikkel	2,625	2,675
Lerado	700	875
Voshell	1,575	1,625
Wellington	1,975	2,075
Ellsworth County:		
Lorraine	1,525	1,625
Other pools	1,610	1,860
Rice-Barton counties:		
Bloomer	2,625	2,225
Chase	4,675	4,375
Geneseo	3,150	2,850
Raymond	475	625
Silica	10,975	11,950
South Silica	1,925	2,150
Keesling	1,050	1,150
Wherry	3,125	4,025
Miscellaneous Rice	7,265	7,330
Miscellaneous Barton	12,635	10,455
Russell County	23,350	22,525
Sedgwick County	3,575	3,900
Ellis:		
Bemis	6,575	7,000
Miscellaneous	2,245	3,015
Kingman County	675	605
Stafford County	7,860	5,125
Greenwood County	9,050	8,750
Butler County	17,750	17,650
Other fields	21,460	22,160
Total Kansas	169,100	168,025

Rice County

Two completions in the Geneseo pool of Rice County were reported as: Continental Oil Co. No. 2 Poland, NW SE SE Section 30-18-7w, which had Arbuckle pay at 3,221-23 ft., and pumped 263 bbl. of oil and 35 bbl. of water in 8 hours. Potential was 778 bbl. of oil per day. Total depth was 3,225 ft.

Continental Oil Co. No. 3-A Lewis, NE SW NW Section 13-18-8w, completed for water disposal well at a total depth of 3,716 ft. It took 625 bbl. of water per hour on vacuum.

H. B. Garden No. 1 Willard, NW SW SW Section 6-19-9w, in the Haferman area, penetrated Arbuckle lime from 3,247-63 ft., total depth, and pumped off after pumping 33 bbl. of oil the first 8 hours. On the second test of 8 hours the well pumped 98 bbl. of oil and no water. Initial potential was 295 bbl. daily.

Miscellaneous

Katz, Harrington & Veeder No. 2 Olson, SW NE SE Section 2-25-8, Greenwood County, Teichgraber pool, had Bartlesville pay at 2,280-2,305 ft., total depth, and was completed for 25 bbl. of oil daily.

Rex & Morris No. 1 Farmer, NE NE NE Section 22-28-7, Brandt pool of Butler County, pumped 35 bbl. of oil per day from Mississippi pay found at 2,694-2,718 ft., total depth.

Rex & Morris No. 1 Allen, NW SW SW Section 21-

26-7, Guenther pool of Butler County, had Mississippi pay at 2,733-57 ft., total depth; was acidized with 2,000 gal. and pumped 40 bbl. of oil and 10 bbl. of water per day.

Hartman & Blair No. 8 Waite, SW NE SW Section 21-31-4, Hittle pool of Cowley County, found Arbuckle lime at 3,320-34 ft., total depth, and flowed 250 bbl. of oil hourly. Bomb potential was 7,107 bbl.

Same company's No. 9 Waite, NW SE NW Section 21-31-4, in the Hittle pool, had Arbuckle pay at 3,368-80 ft., total depth, and was rated 5,985 bbl. of oil daily, bomb potential. No other test of the well was reported.

Gulf Oil Corp. No. 4 Mai, SW SE SE Section 14-11-17w, Bemis pool of Ellis County, had 2,800 ft. of oil in the hole at a total depth of 3,392 ft., and swabbed 54 bbl. hourly. Maximum potential was 3,500 bbl. daily. Arbuckle lime pay was topped at 3,390 ft.

In the Silica pool of Barton County, Stanolind Oil & Gas Co. completed No. 7 Stueckemann, C N½ SW Section 11-20-11w, for an initial potential of 1,487 bbl. Pay in the Arbuckle was topped at 3,278 ft., total depth was 3,281 ft., and in 8 hours the well pumped 495 bbl.

Continental Oil Co. and others No. 2 Johnson, NE NE NW Section 28-17-8w, Edwards pool of Ellsworth County, reached Arbuckle lime at 3,211-34 ft., total depth, and after acidizing pumped 722 bbl. of oil in 8 hours, with initial potential of 2,162 bbl.

Westgate-Greenland Oil Co. No. 2 Hegarty Estate, SE SE NW Section 36-22-5w, Buhler pool of Reno County, was temporarily abandoned at a total depth of 3,936 ft. when the hole filled with 2,000 ft. of water.

Aylward Production Co. No. 1 Wiley, C S½ S½ NE Section 18-23-3w, Burrton pool of Harvey County, had Mississippi lime from 3.358-74 ft., total depth, and

(Continued on Page 92)

Missouri Operations

ST. JOSEPH, Mo., July 3.—With the close of the past week it may be said that the Missouri-Nebraska-Iowa leasing boom is over. This does not mean that all the work of leasing is over, but that the strenuous part of the campaign, begun several months ago, is past. The Ohio Oil Co. is reported to have put the finishing touches on its big block of about 400,000 acres in Appanoose County, Iowa, and with that accomplished it may be recorded that about 975,000 acres have been leased in the Forest City basin at an average of about 16 cents per acre, showing an expenditure of about $1,660,000 for leases alone, to which may be added the cost of geologizing, seismographing, and scouting the four-state area which will add another quarter of a million to the sum invested on the chances of finding new oil and gas fields in the basin. Nothing has been started in Iowa and very little indications of success have been noted in Missouri or northeastern Kansas, but notwithstanding this, the basin will be about the most closely watched wildcat territory in the United States until all the structures contained in it have been tested.

Too much money has been put into the "play" to warrant a mere superficial exploration for results.

With the coming of autumn will come the beginning of the payment of rentals for the second year of the leases, and this, before it ends, will mean the outpouring by oil companies and individuals of an additional $1,500,000. The Forest City basin will be interesting to the oil industry for some time.

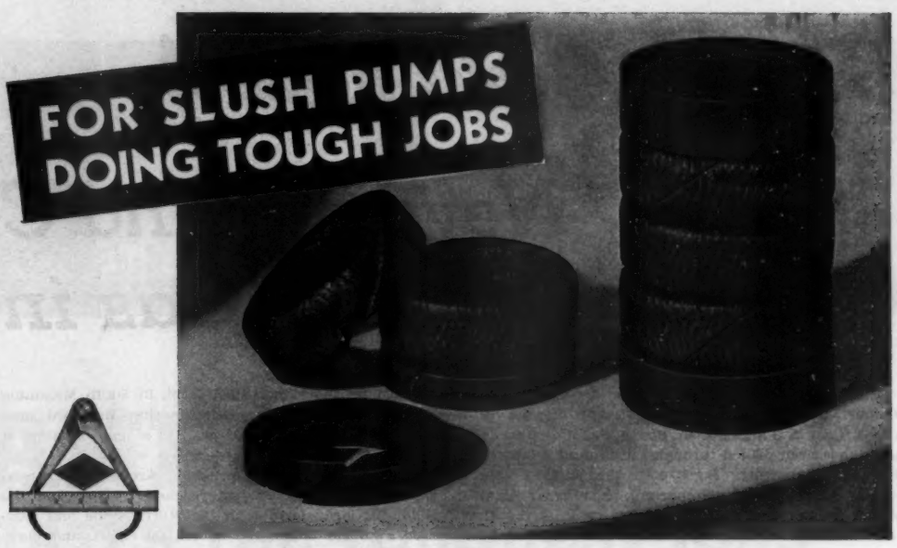
One town in southeastern Missouri has hopes, as the city of Fredericktown, Madison County, is drilling a test, No. 1 Isbell, NW NW NW Section 19-33n-7e, in that county. The fact of a municipality taking a chance on finding oil with its own money is rare.

The Hulse Country Club test in Jackson County, NW SW NW Section 15-49n-32w, found Bartlesville sand at 452-68 ft. and it showed a 1,000,000-cu. ft. gas production, but the crew is drilling ahead and was last reported at 480 ft.

C. F. King and others No. 1 Willis, NE SE SE Section 13-55n-32w, Clinton County, had sand at 1,398-1,406 ft., but the hole filled with water and was shut down at 1,500 ft. while the rig was being repaired.

Slater and others No. 1 Sayer, NE NW SE Section 14-65n-18w, in Putnam County, about 10 miles south of the Nebraska line, found Arbuckle lime top at 1,608 ft. and was drilling at 1,618 ft. on last report. It had fresh water in the St. Peter sand.

Progress of other wells in the state will be found in the wildcat list elsewhere in this edition under a Missouri heading.



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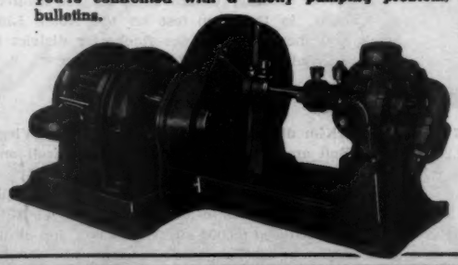

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Eastern Field Report

By STAFF CORRESPONDENT

Newburg and Clinton Sands Produce Gas in W. Virginia

PITTSBURGH, Pa., July 3.—The deep test of the Owens, Libby-Owens, Gas Department on the Bull Creek Coal & Land Co. in Boone County, West Virginia, has been drilled through the Clinton sand which had a fair showing of gas after the shot. This test, while commercially unimportant, has great significance from a geological viewpoint, as it is the first well in the state to find gas in the Newburg and Clinton sands. On the Peytonia quadrangle in Peytonia district, it is 2.2 miles south of Lat. 38° 15' and .75 mile east of Long. 81° 40', on the Warfield anticline. It is 2,400 ft., 70° west of No. 12 on the lease and on the headwaters of Road Fork of Bull Creek in the extreme northeast corner of Boone County.

Beginning at a surface elevation of 779 ft., Corniferous lime was at 4,478 ft. with the Oriskany sand at 4,555-91 ft. which was unproductive and had the appearance of having been worked over as in a shoreline condition. The Newburg was placed at 5,000 ft., with a sand bed at 5,241 ft. which had a gas showing. The Clinton sand was at 5,872-5,944 ft., also with several gas showings and the Red Medina was topped at 5,999 ft. The total depth is 6,004 ft.

The Clinton sand was shot and the gage was 215,000 cu. ft. of gas a day, which, after blowing for a week, gaged 125,000 cu. ft. a day. A packer was then set, acting as a bridge, and the Newburg pay was shot. This produced 200,000 cu. ft. a day but cavings bridged off the Clinton gas and the hole is now being cleaned out to bottom. It is believed that the total gas will be about 350,000 cu. ft. a day. Before shot, the total gage was 75,000 cu. ft. a day from the Newburg and Clinton sands.

In Pennsylvania, Peoples Natural Gas Co. topped the Onondaga lime at 6,534 ft. on the Lowry Martin farm on the Greendale anticline in Wayne Township, Armstrong County, and it is running higher than originally figured. Surface elevation is 1,585 ft. with the Tully lime at 6,120-85 ft. The top of the chert in the Onondaga was at 6,572 ft. at which depth it was shut down and casing is now being run to bottom. Oriskany sand should be reached within the next 100 ft. and it will be of unusual importance if production is present. It is remote from other deep drilling.

SOUTHEAST OHIO

In Medina County, the New York Oil Co. completed a test on the H. L. Gunder farm, Section 16, Chatham Township, in Berea grit at 435 ft. and it produced 22 bbl. the first day after shot. In Section 14, same township, the Oko Oil & Gas Co. completed No. 36 T. W. Brinker in the Berea grit at 378 ft. and it produced 4 bbl. the first day after shot.

In Cuyahoga County, Benedum & Trees have completed about 12 good wells in the Newburg sand around Highland Heights or Mayfield Heights village and are drilling No. 1 Ford at 1,700 ft. and No. 1 Sowin at 1,400 ft. The J. V. Whitbeck test was the smallest of the gas wells which ranged to over 3,000,000 ft. a day at about 2,800 ft. deep. This test is now being deepened to the Clinton sand, the horizon originally intended for the first test.

SOUTHWEST PENNSYLVANIA

In Armstrong County, Pennsylvania, T. W. Phillips Gas & Oil Co. completed a gas well on the C. N. Schaeffer farm in Plum Creek Township, at 1,787 ft. with the Murraysville sand at 1,288-98 ft.; gas 1,296 ft.; Hundred Foot 1,390-1,510 ft. with gas at 1,428 ft. and total gage of 100,000 cu. ft. of gas a day.

In Greene County, Manufacturers Light & Heat Co. completed No. 2 Bennett Wiley in Richhill Township at 2,009 ft. with Big Injun sand topped at 1,939 ft. and 115,000 cu. ft. of gas at 2,009 ft.

In Indiana County, the Phillips company completed the test on the Elmer Steel farm, in South Mahoning Township, at 3,364 ft., with the first Bradford sand at 2,820-68 ft. and 78,000 cu. ft. of gas starting at 2,839 ft.

In Cowanshannock Township, Armstrong County, Ed Young and others had reached 1,447 ft. on the Wilda McCurdy farm with the Murraysville and Hundred Foot gas coming in at 300,000 cu. ft. and blowing down to 60,000 cu. ft. in one day. L. F. Watson and others were drilling at 2,840 ft. in the Jacob Harkleroad test; J. C. Septon and others at 340 ft. on the John Sowers farm; Louden Drilling Co. at 2,300 ft. on the R. H. Goldstrom land; Equitable Gas Co. at 1,951 ft. in the D. W. Raraigh test.

In Manor Township, John Wray has reached 2,625 ft. in the John Guthrie test, and in Boggs Township is building rig on the Samuel Yockey farm. In Wayne Township, Peoples Natural Gas Co. is down 1,390 ft. on the James Gallagher farm.

In Washington Township, Indiana County, Equitable Gas Co. has rig up for the W. M. Parks test and is fishing at 2,791 ft. on the J. J. Potts farm. In West Mahoning Township, T. W. Phillips Gas & Oil Co. is down 1,364 ft. on the Thomas Steffey farm, and at 2,290 ft. on the Sarah Lewis farm. In Young Township, Phillips Gas & Oil Co. is drilling at 2,665 ft. on the B.R.&P.R.R. lease, and at 2,612 ft. in Center Township on the same lease. The Apollo Gas Co. is down 1,656 ft. on the Ed Harkleroad farm, in Boggs Township, Armstrong County, and at 908 ft. on the Drohn Heirs farm, Wayne Township. In Clarion County, Squirrel Hill Gas Co. started drilling the N. A. Sloan test.

In Monongahela Township, Greene County, O. I. Dille and others are building rig on the John Barclay farm. In Richhill Township, A. Phillips and others are building rig on the E. Shepherd farm.

In Center Township, Greene County, Equitable Gas Co. is drilling at 2,565 ft., deepening No. 2 Phillips. In Greene Township, Brummage and others have rigged up the H. Durr test. In Nicholson Township, Fayette County, Duquesne Gas Co. is down 1,330 ft. in No. 2 John P. DeMaske, with the Big Injun sand topped at 1,318 ft.

Washington County

In Amwell Township, Washington County, South Penn Oil Co. is drilling at 2,778 ft. deepening No. 1 J. Q. Zimmerman. Shivers and others have reached 2,330 ft. in the Morgan Prigg test.

In South Franklin Township, Harry Williams & Co. is drilling at 525 ft. in No. 3 Jason Buchanan. In Morris Township, Union Gasoline & Oil Corp. is spudding No. 818 G. L. Craft, and building rig for No. 819 J. R. Andrews. A. V. Lewis and others are down 3,088 ft., deepening the Frank McVay test.

In Mount Pleasant Township, McGuigan Oil & Gas Co. is down 825 ft. in the Alvin Stewart test. In Chartiers Township, Cannonsburg Iron & Steel Co. is drilling at 1,300 ft. on the W. G. Ross farm.

In Beaver County, Columbian Fuel Co. is drilling at 4,569 ft. in the deep test on the Abbie Linnenbrink and thers farm in the Rochester district after being delayed due to cleaning out a cave.

WEST VIRGINIA

In McKim district, Pleasants County, West Virginia, F. R. Bail and others completed a 5-bbl. well on the Poynter Heirs land in Maxton sand at 1,650 ft.

In Cabell County, West Virginia Gas Corp. completed the G. W. Savage test in McComas district at 3,548 ft. The well produced 68,000 cu. ft. of gas a day 24 hours after a shot at 3,345 ft. Rock pressure was 250 lb.

In Gilmer County, Pittsburgh & West Virginia Gas Co. completed No. 7171 Granville Collins in Glenville district, at 1,955 ft., with Big Injun sand at 1,840-1,934 ft. and 500,000 cu. ft. of gas at 1,885-94 ft. In DeKalb district, the McCall Drilling Co. completed the Ellyson heirs test at 2,283 ft., the Injun sand with 29,120 cu. ft. of gas before shot.

In Lewis County, Carnegie Natural Gas Co. deepened No. 2 C. F. Linger in Freemans Creek district from Injun sand, through the Fifth sand and the lower sands to 2,600 ft. All were dry.

In Lincoln County, Ward Gas Co. completed the Ward Stowers test in Union district at 4,002 ft.; Brown shale 3,200-4,002 ft.; Corniferous lime 4,002 ft. The gas gaged 300,000 cu. ft. a day from the Brown shale 48 hours after the shot. In this district, Woodall Gas Co. deepened No. 2 R. L. Stowers from 2,375 ft. to 3,774 ft. with the Brown shale at 3,443-3,625 ft., and a gage of 300,000 cu. ft. a day 9 hours after shot. The Berea gas also increased.

In Carroll district, Lincoln County, R. H. Adkins completed the Irene Perry mineral test at 2,292 ft.; Berea at 2,247-67 ft. yielded 116,000 cu. ft. of gas a day, 24 hours after a shot.

In Mingo County, Kermit Gas Co. completed the test on the McCormick and others lease in Kermit district at 3,074 ft., in Brown shale and it is a gas well gaging 212,000 cu. ft. a day.

In Monongalia County, Pittsburgh & West Virginia Gas Co. completed deepening No. 3 C. E. Hennan in the Battelle district, at 3,453 ft., starting at 2,386 ft. and drilled through the Fourth and Bayard sands with a gas increase to 160,000 cu. ft. a day.

In Pleasants County, A. M. Cooper completed the D. D. Dawson test in Jefferson district, at 1,742 ft., in Squaw sand and it is a small gas well. In McKim district, the test of Calvin Vincent and others on the T. E. Nichols farm, reached 1,750 ft., in Big Injun sand, and it gauged 20,000 cu. ft. a day.

In Ritchie County, Mahaney and Lucas drilled a test on the Madge Smith farm in Clay district through the Squaw sand to 2,035 ft. and it was a dry hole.

In Roane County, Rodgers Properties Co. drilled No. 3 on the Alfred Moore farm in Curtis district through the Salt sand to 1,909 ft., and it was dry.

In Wayne County, the Crete Gas Co. completed a well on the Daisy Carter farm in Union district at 3,325 ft. It gaged 200,000 cu. ft. of gas, 24 hours after shot, from pays at 2,720 ft., 2,970 ft., and 3,326 ft.

In Wood County, Tri County Producing Co. deepened No. 1 Joseph E. Richards, in Union district, through the Maxton sand to 1,415 ft., and it was dry.

Oriskany Gas Field

No wells were completed in the Oriskany gas field in Kanawha County. Two new locations were made. In Poca district, the Brawley-Reid Gas Co. made a location on the A. L. Carpenter farm, elevation 909.02 ft. In Union district, the Ajax Gas Co. made a location on the Anna F. Trent and others lease.

Outside Deep Tests

In Ravenswood district, Jackson County, Joe Rubin and others are shut down at 2,760 ft. on the E. W. Brown farm, testing gas in the Brown shale which gaged about 500,000 cu. ft. a day. It may be completed there instead of continuing to the Oriskany sand as originally planned. This operator has abandoned the location on the Carson farm east of Ravenswood and is building a rig on the Gilbert Starr farm on the Lick Run Road about 1½ miles due east of the town of Ravenswood.

In Ripley district, Jackson County, Columbian Carbon Co. has started drilling on the John F. Parsons farm northeast of Ripley. Everett Starcher and others are drilling at 4,025 ft. in the D. M. Boggess test and

(Continued on Page 90)

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California Field Report

By
L. P. STOCKMAN

Market Situation Favorable If Production Is Kept Down

LOS ANGELES, Calif., July 3.—With the first half of the year gone and the period of peak consumption just started, marketers are looking forward to a good third quarter provided crude-oil production is kept within bounds. Earnings of California companies for the first 6 months of 1939 were substantially below last year and, while this factor is not of unusual interest to operators in general under normal conditions, it is especially important this year because it may force crude-oil buyers to restrict purchases during the forthcoming period of lower consumption. Because of this it is imperative that crude oil production be maintained at its lowest level and thus allow marketers to reduce stocks during July, August and September.

The first reduction of any consequence in stocks since November 1937 occurred during May 1939 and marketers are hopeful that a much-needed respite from consistent accumulations of stocks will materialize. A further restriction will be made as soon as development work at Montebello permits.

Practically all large California companies have established as an objective a program whereby drilling operations will be steady and free of competitive aggressive work wherever possible. This policy will have a tendency to stabilize employment in the field and eliminate the usual letdowns that have characterized operations in the past as well as permit operators to reduce and keep within any budgets set up at the beginning of each year. The necessity of such a program is evidenced by the fact that during 1938 several companies spent several million dollars for drilling operations and wound up the year producing a smaller amount of crude oil due to additional curtailment.

Whether this curtailment or proration in production will be of a cooperative effort or become obligatory by regulatory control measures remains to be determined. The status of the Atkinson control bill recently enacted by the legislature is such that no definite tangible determination of its effect on production can be made. Opponents and proponents of the bill are equally positive of its future fate; suffice it to say, however, that a referendum will be invoked as soon as it is signed by Governor Olson. At any rate it can become of very little consequence until late in the year due to the statutory time limitation and the necessity of setting up the administrative machinery. If it goes into effect operators will have several days in which to augment stocks if found advisable and while the Central Committee of California Oil Producers will attempt to discourage such a procedure it may become a reality as soon as information is available that the bill will become operative. In the meantime operators will conform with curtailment and hope for the best depending upon the viewpoint.

Wilmington

Operators engaged in developing tideland leases and acreage in the Long Beach Harbor section of the Wilmington field of Los Angeles Basin heaved a sigh of relief this week when Superior Judge Emmet H. Wilson handed down a decision refusing to grant an injunction to E. G. Sinclair and L. D. Cherry to prevent the city of Long Beach from exploiting the submerged tidelands. The plaintiffs contended they had exclusive rights to drill in the tidelands as they had filed on the property under the United States law governing mineral deposits in February 1939.

This decision was especially welcomed by officials of Brookline Oil Co. which recently closed negotiations for a block of 225 acres in and around the East Basin and which called for the drilling of a minimum of 17 wells if commercial production was found. The lease acquired by Brookline comprises 145 acres extending the entire length of the basin's northern shoreline, 76½ acres on Terminal Island and a 3½-acre parcel in the entrance of Cerritos Channel. Approximately one-half of the acreage involved appears to be possibly productive for either Ranger, Terminal or Ford zone production. The eastern part of this acreage lies within production contours projected from producing wells on adjacent property and should prove productive unless faulting results in a subsurface unconformity.

Tideland development is proceeding at a fast pace in the Long Beach Harbor section of the Wilmington field and the number of new locations and derricks going up indicates this work will continue at the present rate for several months.

Wilmington Completions

Three new wells were completed in the Wilmington field during the week, one of which was a tideland well. The latter was No. 6-Y of Long Beach Oil Development Co., which was brought in flowing 105 bbl. of 19.3-gravity oil from the Ranger zone and 253 bbl. of 28.9-gravity per day from the lower Terminal zone. This new well, which is not producing from the upper Terminal, was finished with an 11¾-in. water string landed at 2,470 ft. and 1,545 ft. of 8⅝-in. liner landed at 3,971 ft. and carrying perforations at 2,468-896 ft., 3,847-971 ft. and cemented through perforations at 3,847 ft. Shortly after completion the Ranger zone was shut in and the lower Terminal zone produced through a 15/64-in. bean. The initial daily production of this and other completions in the Wilmington field does not represent what the wells could do with larger beans as the Central Committee has discouraged the making of potential production tests since any overage must be made up by shutting in a well until the cumulative allowable has caught up with actual production. Operators hesitate to complete a well and then shut it in and consequently have kept the initial of all wells down to a minimum.

Union Pacific Railroad Co., which is running two strings of tools and has several derricks erected for early work, completed another well this week when No. 110 was brought in flowing 342 bbl. of 22.7-gravity oil per day from the upper Terminal zone with bottom of the hole at 3,732 ft. This new well, which was brought in flowing through a 24/64-in. bean, was finished with a 7-in. water string cemented at 2,798 ft. and 466 ft. of 4½-in. liner including perforations at 2,621-778 ft. and at 2,798-3,067 ft. The liner was landed at 3,067 ft. The potential assigned No. 109, a recent completion of Union Pacific Railroad Co., is indica-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

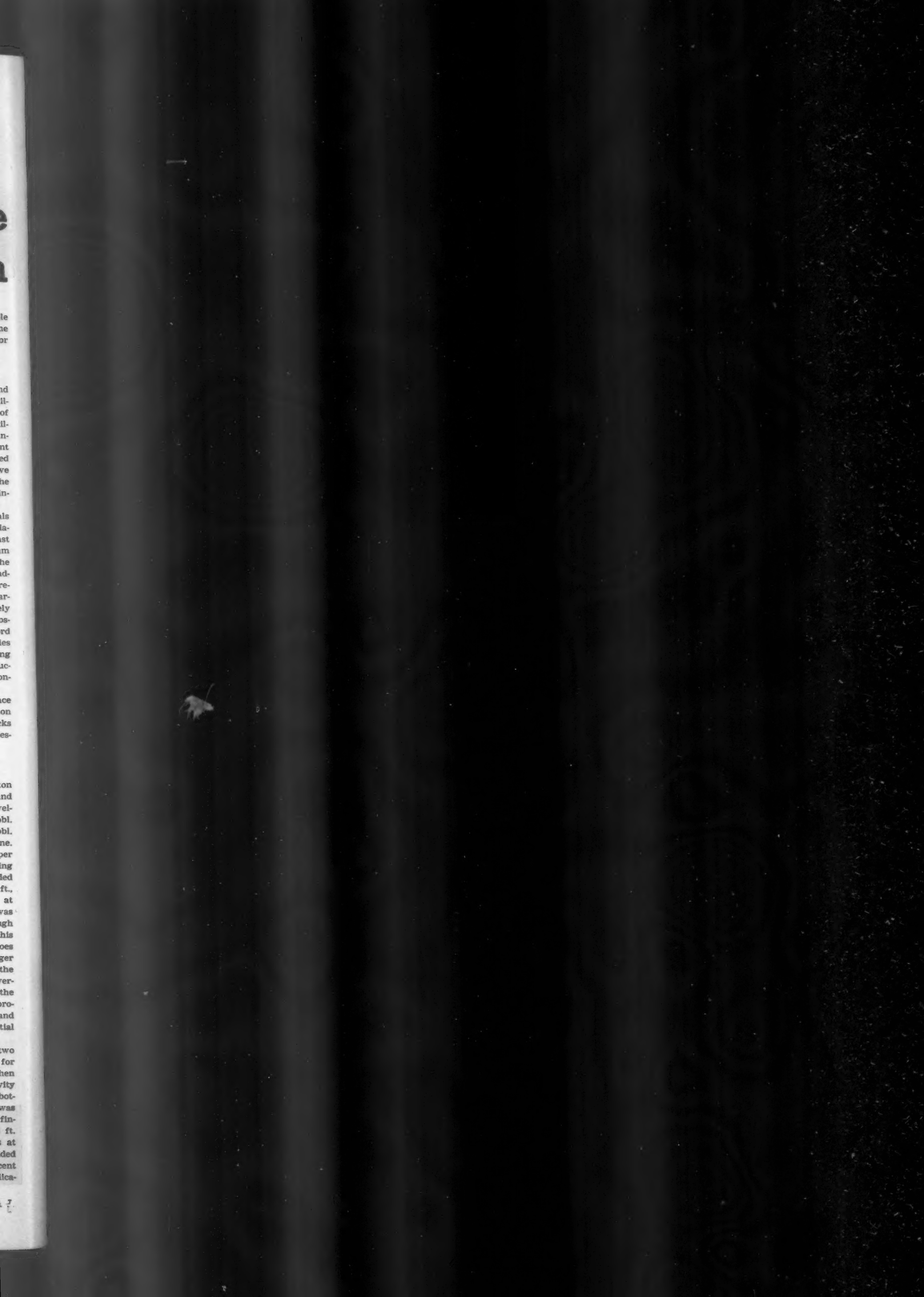
	June 24		June 17			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	247,520	272,750
Fuel oil	73,849	10,550	133,415	19,059	1,091,755	.....
Diesel and gas oil	.....	.....	.....	.....	163,501	.....
Gasoline	107,257	15,322	145,171	20,739	1,600,941	1,469,363
Kerosene	.....	.....	.....	.....	122,200	199,453
Foreign exports—						
Crude oil	.....	.....	295,991	42,284	7,139,072	12,062,118
Fuel oil	84,695	12,099	336,376	48,054	4,316,150	4,118,665
Diesel and gas oil	235,069	33,581	211,799	30,257	3,233,853	2,876,236
Gasoline	158,240	22,606	90,207	12,887	3,735,443	3,471,810
Kerosene	.....	.....	120,460	17,209	773,750	574,647
Lubricants	23,191	3,313	.....	.....	65,225	15,564
Coastwise-domestic:						
Crude oil	200,149	28,593	122,671	17,524	5,892,092	5,292,652
Fuel oil	130,656	18,665	210,437	30,062	4,372,330	5,130,831
Diesel and gas oil	21,140	3,020	12,685	1,812	1,161,169	878,407
Gasoline	359,651	51,379	397,214	56,745	7,148,066	7,348,064
Kerosene	4,687	670	.....	.....	182,340	137,831

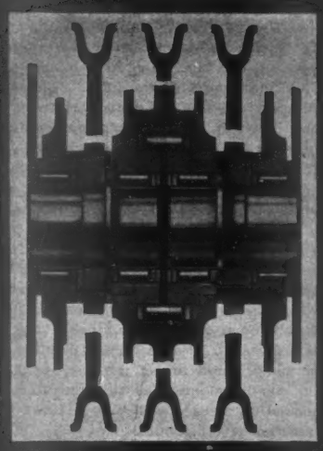
TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

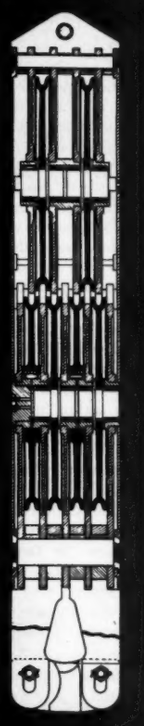
Intercoastal-domestic:						
Fuel oil	.....	.....	67,774	8,968	124,055	.....
Diesel and gas oil	.....	.....	.....	.....	69,550	178,662
Gasoline	.....	.....	.....	.....	.....	9,499
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	.....	.....	2,998	428	14,182	13,665
Foreign exports—						
Crude oil	.....	.....	50,141	7,163	2,589,972	2,709,262
Fuel oil	59,381	8,483	79,876	11,411	1,535,541	1,060,946
Diesel and gas oil	154,332	22,047	31,067	4,438	1,186,192	1,107,878
Gasoline	61,983	8,855	124,343	17,763	1,482,755	2,938,627
Kerosene	34,237	4,891	6,547	935	346,036	448,592
Asphalt	.....	.....	35,049	5,150	42,968	56,258
Lubricants	1,140	163	.....	.....	286,793	184,327
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Fuel oil	110,146	15,735	77,149	11,021	2,717,348	3,148,197
Diesel and gas oil	19,927	2,847	28,390	4,056	495,558	735,534
Gasoline	95,516	13,645	231,208	33,030	3,067,936	3,319,796
Kerosene	27,520	3,931	18,770	2,681	361,253	231,609

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	247,520	272,750
Fuel oil	73,849	10,550	196,189	28,027	1,215,810	.....
Diesel and gas oil	.....	.....	.....	.....	233,051	178,662
Gasoline	107,257	15,322	145,171	20,739	1,600,941	1,478,862
Kerosene	.....	.....	.....	.....	122,200	199,453
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	.....	.....	2,998	428	14,182	13,665
Foreign exports—						
Crude oil	.....	.....	346,132	49,447	9,729,044	14,771,380
Fuel oil	144,076	20,582	416,252	59,465	5,851,691	5,179,611
Diesel and gas oil	389,401	55,629	242,866	34,695	4,420,045	3,984,114
Gasoline	220,223	31,460	214,550	30,650	5,218,198	6,410,437
Kerosene	34,237	4,891	127,007	18,144	1,119,786	1,023,239
Asphalt	.....	.....	36,049	5,150	42,968	56,258
Lubricants	24,331	3,476	.....	.....	352,018	199,891
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Crude oil	200,149	28,593	122,671	17,524	5,892,092	5,292,652
Fuel oil	240,802	34,400	287,586	41,084	7,089,678	8,279,028
Diesel and gas oil	41,067	5,867	41,075	5,868	1,656,727	1,613,941
Gasoline	455,167	65,024	628,422	89,775	10,756,002	10,667,860
Kerosene	32,207	4,601	18,770	2,681	543,593	419,440







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tive of the potentiality of new wells in this field because despite it was allowed to produce only 894 bbl. per day initially it was given a potential of 2,657 bbl. This potential is based on location, penetration, bottomhole pressure and other governing factors.

Petroleum Midway Co. completed a normal Ranger zone well in the older section of the field when No. 1-G Kupfer in the vicinity of Anaheim Boulevard and Hayes Street was brought in flowing 122 bbl. of 14.6-gravity oil through a 20/64-in. bean with bottom of the hole at 3,468 ft. The hole was finished with a 7-in. water string landed at 3,186 ft. and 309 ft. of 5¾-in. liner including 274 ft. of perforated landed on bottom. The Wilmington field headed the active drilling list for more than a year but relinquished this distinction a few months ago to Montebello where operators are exploiting deep productive zones in the west end of the field. Ford zone development, however, is being retarded at Wilmington in the interests of conservation and curtailment of production.

Montebello

Superior Judge Emmet H. Wilson acceded to the plea of the Department of Natural Resources for an injunction prohibiting the waste of gas in the west end of the Montebello field and ordered operators to conform immediately with provisions of the California Gas Conservation Act. As a result, production in this field has been declining for several days and the blowing of gas to the air has been discontinued and practically entirely eliminated. To make the injunction effective operators were allowed to share equitably in the field's gas outlet of 23,000,000 ft. per day. No cognizance was taken in the injunction of the crude-oil curtailment program except that in cases where the gas-oil ratio was high operators were ordered to reduce crude-oil production to a top of 250 bbl. and not to exceed 2,000,000 ft. of gas daily.

The success of the Department of Justice in the Montebello field will be followed by the instituting of similar action in other fields unless an immediate improvement is shown. Judging by the amount of gas waste, operators in the Rosecrans field will be cited as defendants within another week or 10 days unless some constructive action is taken to correct the situation. The California Gas Conservation Act prohibits both surface and underground waste, but during recent cases the Department of Natural Resources has concerned itself with surface waste as this is most easily proved and corrected faster as it does not involve the amount of engineering data that would be required for a more detailed order.

Several new wells are nearing completion in the Montebello field and some of them should be tanking oil within a few days. During the week three former upper zone wells were returned to production after they had been redrilled and deepened to the La Merced zone. These rejuvenated wells are No. 2 Braun of Standard Oil Co., No. 2 Taylor of Kern Oil Co., and No. 2 Howard & Smith of Union Oil Co. All were brought in flowing under wraps and consequently the initials registered are only a part of their respective potentials. Kern Oil Co., which, then operating as St. Helens Petroleum Co., discovered the deep productive zones in the west end of the Montebello field, recompleted No. 2 Taylor flowing 285 bbl. of 36.4-gravity oil and 400,000 cu. ft. of gas daily from a depth of 7,135 ft. This company, which is stepping up the scope of work in order to keep step with drilling operations of other operators brought this well in flowing through a 32/64-in. bean behind which it shows a tubing pressure of 350 lb. and a casing pressure of 750 lb. The hole was finished with a 9⅝-in. water string landed at 6,135 ft. and 1,037 ft. of 7-in. liner including perforations at 6,330-400 ft. and at 6,635-695 ft.

Standard Oil Co., which has had leases on several properties as well as fee acreage in the extreme western end of the Montebello field for a number of years found itself with a number of locations available for work when St. Helens Petroleum Co. proved up the deep Pliocene and Miocene as productive more than a year ago. Previously, Standard had drilled what was then considered a deep conclusive test but subsequently suspended operations and abandoned the hole when it failed to show commercial production. Since that time, Standard has completed excellent wells on both sides of that deep test which later drilling has indicated was not carried deep enough to prove or disprove the existence of large production.

Progressively deeper drilling has since opened up several fingers of the sixth, seventh and La Merced zones for development and Standard Oil Co., in keeping with present practice, is aggressively exploiting the lower horizons although strictly conforming with curtailment from a production standpoint. This company, which is running five strings of tools, completed No. 2 Braun this week flowing 940 bbl. of 36.9-gravity oil and 1,000,000 cu. ft. of gas per day through a 1-in. bean from a depth of 7,653 ft. Union Oil Co.'s contribution to the list of Montebello producing wells this week was No. 2 Howard & Smith, which was brought in flowing 365 bbl. of 36.5-gravity oil and 500,000 cu. ft. of gas per day through a 9/64-in. bean from 7,602 ft. This well, a former upper zone producer, was finished with an 8⅝-in. water string landed at 5,437 ft. and 2,241 ft. of 5½-in. liner including 100 ft. of perforated landed on bottom and cemented through perforations at 7,498 ft. and then gun-perforated at 6,964-7,080 ft., 7,090-112 ft. and at 7,156-305 ft.

Coalinga District

Two new wells were completed in the Southeast Coalinga field of Fresno County and several more are scheduled for completion before the close of another 48 hours. The new wells finished in this field were R. S. Lytle No. 75-7-F in Section 7-20-16 and No. 1 Exeter fee of the Texas Co. in Section 6-20-16. The former had not completed the initial 24-hour flow test but has been assigned the usual arbitrary initial of 1,500 bbl. daily. It, like other recent completions in the Southeast Coalinga field, is capable of greatly exceeding this computed initial but inasmuch as no potential flow tests are conducted in this field arbitrary initials must be used. No. 75-7-F was bottomed at 8,150 ft. after having logged top of the Gatchell oil sand at 7,585 ft. and the water shutoff effected by a string of 9⅝-in. casing landed at 7,558 ft. No. 5-18-F in Section 18-20-16, another drilling project of R. S. Lytle which he is operating for Seaboard Oil Corp., Honolulu Oil Corp. and former stockholders of Petroleum Securities, the latter a Doheny holding and operating company, cored top of the pay at 7,025 ft. and has been completed at 7,486 ft. Flow lines are now being hooked up and the well will be flowing to tanks within another several hours.

Texas Co. completed its first producing well in the Southeast Coalinga field when No. 1 Exeter, on a 160-acre parcel owned in fee, was brought in flowing 1,265 bbl. of clean 32.4-gravity oil and 700,000 cu. ft. of gas per day from the Gatchell oil sand with bottom of the hole at 8,165 ft. This well extends the productive limits of the Gatchell zone about 1,500 ft. northeast and proves up several additional locations for the company. A second well is being drilled on this property and should be ready for a production test within another two weeks. A third well has been located and will begin making hole shortly. No. 1 Exeter fee, which topped the Glauconitic sand at 7,709 ft. and top of the Kreyenhagen at 6,450 ft., was finished with a 7-in. water string landed at 7,710 ft. and brought in flowing through a ½-in. bean. In the Northeast Coalinga field, Amerada Petroleum Corp. has cored top of the Gatchell zone in No. 26-17 S.P.L. in Section 17-19-16 at 8,200 ft. and is drilling in the pay at 8,250 ft. This well, 990 ft. north of No. 7-17 S.P.L. Amerada Petroleum Corp. discovery well, is running 125 ft. lower structurally but appears definitely assured of production. If normal progress is made during the next week, it is quite likely the status of No. 48-18 Webb of Bandini Petroleum Co. in the Northeast Coalinga and No. 12-82-C of Holly Oil Co. in the Southeast Coalinga field should be determined. Both wells are outposts and will extend the productive limits of each area if commercial production is secured. South of the Southeast Coalinga field, Superior Oil Co. is tied up with mechanical trouble in No. 1 Pleasant Valley Farming in Section 22-20-15 at 8,358 ft., where a possibly productive sand of undetermined thickness is believed to have been found. This is a no-dope hole and the company has refused to release any authentic data regarding formation.

San Joaquin Basin

In the Rio Bravo field of Kern County, General Petroleum Corp. has completed No. 2 Van Ness in Section 2-29-25 flowing 1,770 bbl. of 37.1-gravity oil and 1,000,000 cu. ft. of gas per day through a 29/64-in. bean from the upper Rio Bravo zone with bottom of the hole at 11,514 ft. Top of the pay was logged in this well at 11,484 ft. and it was brought in barefoot, there being no pipe below the shoe of the 6⅝-in. water string landed at 11,465 ft. No. 2 Van Ness is located on the southwest flank of the Rio Bravo structure and shows a casing pressure of 1,500 lb. indicating that it is capable of greatly exceeding the established initial. Completion of No. 2 Van Ness leaves two incompleted

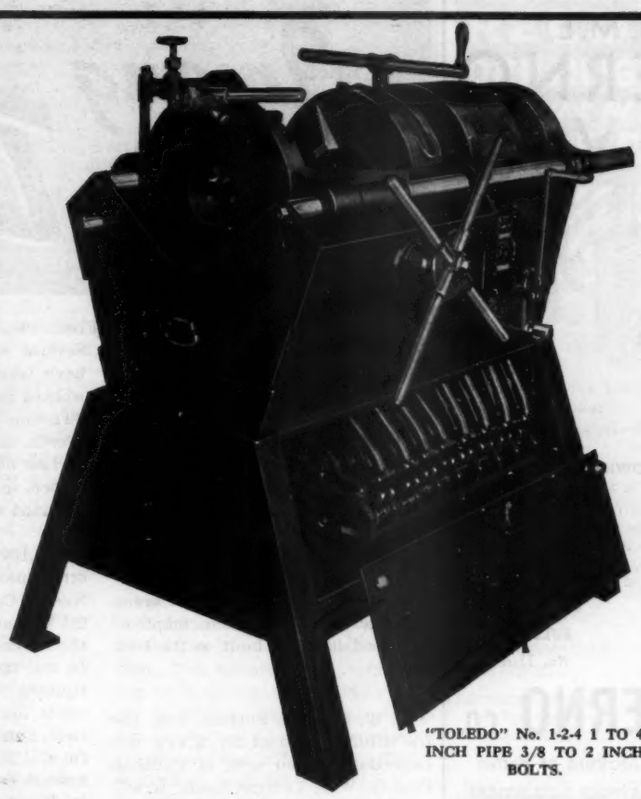
drilling projects under way in the Rio Bravo field with one additional derrick standing ready for work. The Arvin field of Kern County, discovered a few months ago by a joint test of Superior Oil Co. and Standard Oil Co., yielded another good well this week when No. 2 Jewett of Standard Oil Co. in Section 16-31-29 was brought in flowing 1,063 bbl. of 27.4-gravity oil and 500,000 cu. ft. of gas per day from 6,118 ft. This new well, which was carried down to 6,300 ft. before being plugged back to the completion depth, was finished with an 8⅝-in. water string landed at 6,000 ft. and 188 ft. of 6⅝-in. liner carrying perforations at 5,985-6,154 ft. Top of the productive Chanac was logged at 6,047 ft. and the well was brought in through a 96/64-in. bean. No. 2 Jewett of Standard is an offset of No. 1 Derby of Universal Consolidated Oil Co. The latter company is coring in upper Chanac in No. 2 Derby in Section 15-31-29 at 5,940 ft. and should reach the completion depth shortly. This well is only 160 ft. south of No. 1 Berry of Union Oil Co., which was abandoned last year after failing to show commercial production. This apparent failure of No. 1 Berry to show good production is due to the location of a controlling fault which fades to the southwest and thus only about 150 ft. separated this dry hole from becoming a producing well. Up in the Kettleman North Dome field, Kenda has completed No. 58-22-Q in Section 22-22-18 flowing 1,432 bbl. of very clean 32.2-gravity oil and 1,332,000 cu. ft. of gas per day from the Temblor with bottom of the hole at 7,605 ft. This new well, which was brought in flowing through a 48/64-in. bean, was finished with an 8⅝-in. water string landed at 6,905 ft. and 726 ft. of 6⅝-in. liner landed at 7,601 ft. and perforated at 7,046-135 ft., 7,240-280 ft., 7,305-341 ft., 7,505-571 ft. and at 7,571-601 ft. and was cemented through perforations at 7,032 ft., 7,135 ft. and at 7,240 ft. Top of the McLure shale was logged at 5,400 ft. and top of the Temblor was cored at 6,732 ft.

Kern County

In the Lost Hills field, Tide Water Associated Oil Co. has recompleted No. 10-B Williamson in Section 11-26-20 pumping 10 bbl. of 14.5-gravity oil cutting 50 per cent after plugging back the hole from 1,610 ft. to 1,395 ft. This well is located far out on the western end of the Lost Hills field and is producing from a separate accumulation which up to date has failed to show favorable production. Richfield Oil Corp. this week completed negotiations for a lease involving in excess of 50,000 acres of potential oil land in the southern end of the San Joaquin Valley. The land was leased from the Tejon Ranch Co. with negotiations being handled by Hall-Baker Co. Approximately 34,000 acres goes to Richfield Oil Corp. from the Tejon Ranch Co. under a straight oil and gas lease and the remaining 16,000 acres goes to Richfield through the Reserve Oil & Gas Co., the latter company holding an operating interest in this 16,000 acres. The entire 50,000 acres essentially blankets the entire south end of San Joaquin Valley covering a strip of 5 to 8 miles wide valleyward from Grapevine Station and extending northwestward to Wheeler Ridge and in the opposite direction northeastward a distance of about 17 miles to Commanche Point. Although details of the drilling plans and obligations of Richfield Oil Corp. are not available, it is anticipated an extensive program of geological and geophysical exploration and core hole testing will follow at an early date.

The deal involving about 50,000 acres is of primary importance in view of a deep outpost well drilled by Richfield Oil Corp. in the Wheeler Ridge field which adjoins the newly acquired block of acreage. No. 1 Kern County Land, the wildcat of Richfield Oil Corp. in the Wheeler Ridge field of Kern County, in Section 28-11-20, is bottomed in an oil sand of undetermined potentiality at 11,004 ft. The formation is presumably Oligocene with the top of these rocks at about 10,850 ft. The forthcoming test to be made in this well is of primary importance because if large production is secured it will be the first time in the San Joaquin Basin that this formation has been found productive except in very small amounts. California Exploration Co. has suspended drilling operations in No. 1 Salisbury, a wildcat in the Buttonwillow section of Kern County in Section 7-29-24, at 12,989 ft. due to failure of the well to show production at 12,716-704 ft. with the hole plugged back to 12,740 ft. and has moved the crew to Lost Hills where work will be resumed on No. 2 Occidental in Section 24-26-20. No. 2 Occidental has been standing idle for some time with bottom at

(Continued on Page 87)



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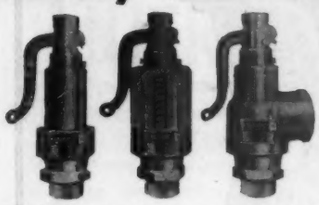

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Among the Drilling

WALTER J. DONNELLY, Fort Worth, Tex., contractor, has been awarded contract for drilling a wildcat test in the Lynn area of Lea County, New Mexico, for Culbertson & Irwin, Inc., Midland. The test will be No. 1 Lee Carter, C NE NE Section 25-23s-36e, on a farmout from Shell Oil Co., Inc., and Devonian Oil Co. The wildcat is 3½ miles east and ¼ mile south of Continental Oil Co. No. 1-A-26 Lynn, discovery producer between the Lynn and Cooper areas. Cellar and pits have been completed and road is being built to the location.

W. W. LITTLE, Putnam, Tex., has the drilling contract for a new test near the Putnam area of Callahan County, West Central Texas. It will be drilled for Charles D. Hagerty, San Angelo, as his No. 1 Weddington, 1,170 ft. from the S and 150 ft. from the E line of Section 4, Baylor Orphans Asylum Lands. The test has been spudded.

ALBERT SILER AND CONN Johnson of Melvin, Tex., has been awarded the drilling contract for a wildcat test in Concho County, Texas, by L. G. Byerley of Midland. It is on the Mrs. Lula Noyes estate, 350 ft. out of the NW cor. of Section 1402, M. Creyat Survey. Cable tools will be used in drilling and contract depth is 1,800 ft. The wildcat is 11 miles east and 4 miles south of Eden and 1½ miles from the E line and 4 miles from the S line of Concho County.

L. J. MAXWELL, of Coleman, Tex., partner in Maxwell Drilling Co. and connected with Anzac Oil Corp. of Coleman, has returned from Wellsville, N. Y., and is launching a drilling campaign on the Morris ranch of Coleman County, where Anzac Oil Corp. recently opened a new pool. Maxwell Drilling Co. has spudded No. 5 Anzac-Morris, 660 ft. north and west of the pool opener, and No. 5-C Anzac-Morris, 6,500 ft. from W and 4,950 ft. from N lines of the David Breeding Survey. The discovery well was completed for 2,250 bbl. daily from 2,174-90 ft.

FRED LAUSEN, Tulsa, is moving in rotary equipment for drilling a new 4,000-ft. Strawn sand wildcat in Collins County, eastern Texas. It will be Sam L. Thomas, Dallas, No. 1 Tom Newsome, 200-acre tract in the B.B. B.&C. Survey. The location is on a 10,000-acre block assembled by McElreath & Suggett, Fort Worth, several years ago and in which Byrd-Frost, Inc., Dallas, has part interest. Several companies are reported to have taken spreads. The block was worked by torsion balance under the direction of Ralph Liddell, Fort Worth, and is credited with a subsurface high. Several tests have been drilled in the area, some of which reported shows of oil and gas.

ALLEN & MORRIS completed another producer in the Luby field, Nueces County, Texas, for Seaboard Oil Co., and started an operation in the La Rosa field for Coronado Corp. In the latter field two rotaries are running for the same company, while northeast of the East Mathis field, San Patricio County, Seaboard Oil Co. No. 1 Blumberg, a projected 9,000-ft. hole, is drilling below 3,865 ft. Shield Oil Co. No. 1 Magee, a wildcat in Nueces County, is drilling at 4,200 ft., while Agua Dulce No. 3 Talbert, in the same county, is preparing for a production test at 4,815 ft. Midway between the La Rosa and Woodsboro fields, Phillips Petroleum Co. No. 1 Toland is drilling below 4,815 ft.

GEORGE ECHOLS staked location for three wells in the South China field, Jefferson County, Texas, which he opened the previous week with the completion of Hebert & Smith No. 1 Fontenot. In the University field, East Baton Rouge Parish, Louisiana, Echols completed his second producer, and is moving the rotary to a new location. In the Aldine area, Harris County, E. C. Hankamer No. 1 Rowland is flowing distillate from new perforations at 6,642-48 ft.

ROWAN DRILLING CO. has spudded its No. 1 Vilven, a wildcat test in the Iowa Colony area, Brazoria County, Texas. The well is in the J. S. Talmage Survey and is scheduled to be drilled to a depth of 6,500 ft.

GRAY & WOLFE completed Gulf States No. 1 Haas as an extension producer to the Eola field, Avoyelles Parish, Louisiana, and the rotary has been moved to a wildcat location in the same parish for the Lisbon-Iberia Oil Co.

HARRY BASS DRILLING CO. has started drilling operations on Seaboard Oil Co. No. 3-A John LaPrelle, the third well to be drilled in the North Luby field, Nueces County, Texas.

ROWAN & HOPE received contract from the Argo Oil Corp. for

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Contractors

No. 1 Roos and Bennett, a semiwildcat in the Santo Domingo area, Starr County, Texas.

E. K. CARY DRILLING CO., McPherson, Kans., and others drilled a semiwildcat well in SW NW Section 21-16-11w, northeast of Hitschman in Barton County, Kansas, which has been given a potential of 58 bbl. of oil, based on a preliminary test of the Arbuckle dolomite at 3,351 ft.

OLSON DRILLING CO., Tulsa, drilled No. 3 Soldani, NW Section 24-26-4e, Osage County, Oklahoma, to 3,112 ft. in Burbank sand.

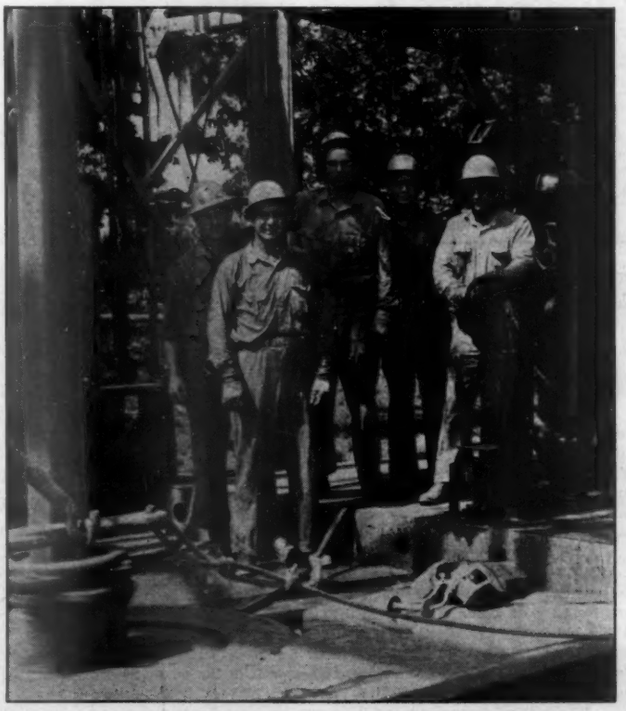
RED IRON DRILLING CO. No. 1 Spearman, in the Burnham Survey, Marshall area, Texas, was drilling below 2,205 ft. This wildcat was spudded over the week-end. It is located 4 miles southwest of Atlanta in Cass County, Northeast Texas, and will seek production in the Paluxy and perhaps the basal Glen Rose of the Trinity.

PATTON DRILLING CO. No. 1 Lee, in SW cor. SE of Section 11-39n-30w, 8 miles southeast of Butler, in Bates County, Missouri, has recently been spudded in.

CONLEY DRILLING CO., Shawnee, Okla., has drilled No. 1 Selby, in NE¼ Section 8-15-6e, a semiwildcat in the Skellyville district, Lincoln County, Oklahoma, to a total depth of 3,146 ft. and shot with 220 qt. The well gaged 3,400,000 cu. ft. of gas, spraying 52-gravity oil at the rate of 15 bbl. daily.

NOBLE DRILLING CO., Tulsa, drilled Pure Oil Co. No. 1 Noble, NE SE Section 35-3s-1, north of Ardmore, Okla. The operators have been moving in separator and building 2,000 bbl. of storage. The well was shut in for 24 hours and built up a pressure in excess of 500 lb. It swabbed 20 bbl. of fluid an hour, 95 per cent net oil, on latest test after perforating casing in the Sycamore lime at 4,150 to 4,234½ ft. It probably will be acidized before completion.

HELMERICH & PAYNE, Inc., Tulsa, and the Blackwell Oil & Gas Co. have staked location and will start work immediately in NW NW Section 13-17-1, south of the Coyle pool, near Goodnight, Payne County, Oklahoma.



Day tour of Phillips Petroleum Co. on location at the Jefferson Island field, Iberia Parish, coastal Louisiana. W. E. Stephens, Van Williams, Wade Ramsey, G. R. Cox and W. E. Martin (driller)

You're out-dated if you are depending on anything but the Gulf Coast Map for accurate information.

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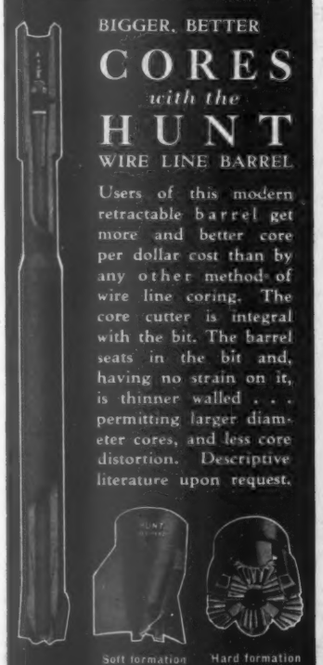

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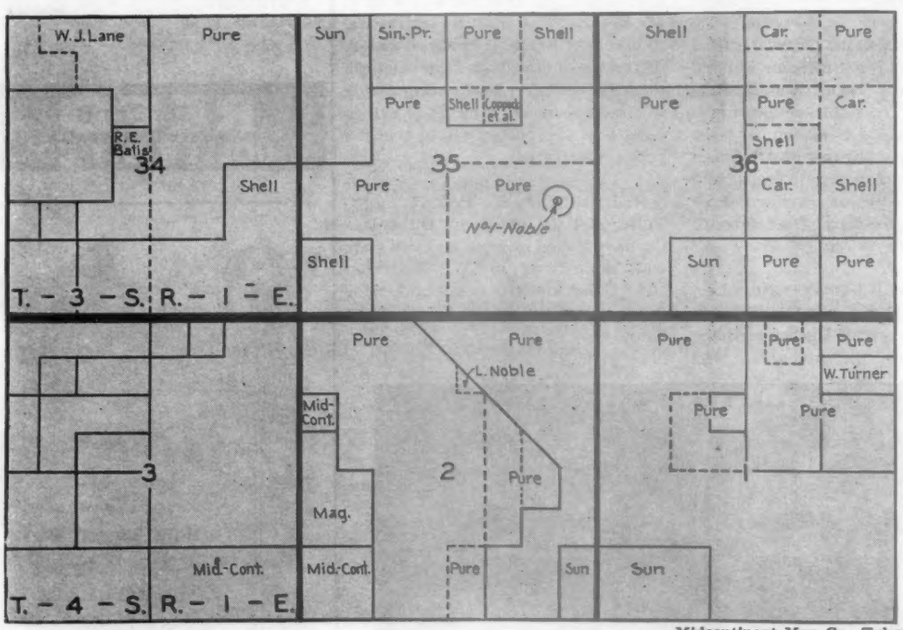
"LITTLE CHIEF"

Oklahoma Operations

By
DAL DALRYMPLE

Pure Opens a Pool in Carter County in Woodford Shales

A new pool was opened in Carter County, Oklahoma, last week by Pure Oil Co. with its No. 1 Noble, C NE SE Section 35-3s-1e, about 14 miles east and north of the old Healdton field. It was in the course of completion and is definitely believed to be a producer from the Woodford shale. The well had been started as an 8,500-ft. test and after penetrating Arbuckle lime topped at 7,390 ft. and finding only a showing of oil it went down to its contract depth. It bailed dry and was acidized with 25,000 gal. and a water load. Only the water and the acid was recovered. The company then ordered tests of formations up the hole. After testing Hunton lime at 4,638-4,737 ft. and finding it dry, the hole was plugged back to 4,500 ft. Tests were made between 4,300 and 4,400 ft. The well produced 4 to 5 bbl. per hour. The Woodford shale had been topped at 4,289 ft. and casing was shot with 133 bullets between 4,116 and 4,322½ ft. and the well produced 20 bbl. of fluid per hour 99 per cent oil.



Midcontinent Map Co., Tulsa

Pure Oil Co. opened a pool in Carter County when it plugged back its 8,500-ft. test in Section 35-3s-1e to Woodford shale. The well looks good for 20 bbl. per hour

The Phillips Petroleum Co. has a producing well in the Calvin field in Hughes County, the second well in the pool. It is No. 1 Shemwell, C SE NW Section 8-5-10. Viola lime at 4,375-95 ft. was acidized and the well flowed over the derrick top, cleaning itself, after which it sprayed oil and gas. It was shut in for lack of tankage.

The Peru sand pool recently opened in Section 10-28-11, Osage County, was given its second well when Charles Petroleum Co. and P. A. J. Holbert No. 2 Pierce in SE SW SW Section 10-28-11 flowed 150 bbl. on a preliminary test from Peru sand at 928½-76 ft., on Saturday. The same firm's No. 1 Pierce is pumping and flowing about 75 bbl. a day. No. 2 is not yet a completion.

Nels Burton and others No. 1 Boggs, NE NE SE Section 16-9n-2w, Cleveland County, was acidized on Friday with 10,000 gal. Previously it had flowed 100 bbl. of oil in 10 hours by heads. Seven-inch casing was set at 7,375 ft., and hole bottomed at 7,472 ft. Following the acid treatment the crew swabbed into pits, recovering some new oil with the load and acid water. It was not a completion.

A new wildcat has been started in northern Pottawatomie County by Kirk-Green-Way, Inc., and W. J. Mead on the Boland farm, SE NE NW Section 28-11-3. It is contracted to penetrate the Wilcox sands.

Following were the completions of the week in the state together with the status of wells near completion in various counties:

Pottawatomie County

Denver Producing & Refining Co. No. 2 Schrader, NE SE NE Section 1-6-4, in the St. Louis district, was acidized with 6,000 gal. at 4,120-36 ft., and pumped 700 bbl. of oil and 1,300 bbl. of water and was completed. Phillaine No. 2 Garrett, NE SE NW Section 28-7-4, deepened from 4,132 ft. to 4,226 ft., and then perforated at intervals from 4,083 ft. to bottom, produced 50 bbl. of oil and 2,200 bbl. of water. Wood No. 2 Tobin, SW NW NW Section 22-7-5, flowed 185 bbl. initially from Calvin sand at 2,747-81 ft. W. A. Villenes No. 2 Millsap, SW NW SW Section 23-7-5, flowed 120 bbl. of 43-gravity oil from pay at 2,683-2,700 ft. It had been drilled to 4,210 ft., and casing perforated opposite the pay. Tabor No. 6 Miller, NW SE SE Section 29-7n-5e, dolomite at 4,060-4,143 ft., total depth, acidized with 5,000 gal., flowed 250 bbl. of oil and 50 bbl. of water. Sinclair Prairie Oil Co. No. 7 Gammon, SE SW NE Section 30-7n-5e, deepened from 4,263 ft. to 4,353 ft. and acidized with 5,000 gal., and flowed 24 bbl. of oil and 21 bbl. of water in 9 hours. Watchorn Oil & Gas Co. No. 20 Vanselous, in Section 32-7-5, had Earlsboro sand at 3,089-3,166 ft., total depth, but found it dry, and plugged back to 2,854 ft. and perforated casing at 2,848-54 ft. The well produced 75 bbl. of oil and 25 bbl. of water.

Olsen No. 2 Gillis, SW NW NW Section 5-10-4, flowed 650 bbl. a day from Earlsboro sand at 4,417-51 ft.

Alma Oil Co. No. 1 Benesh, SE SE SW Section 3-11-6, was dry and abandoned. It had been drilled to 4,809 ft., after finding first Wilcox sand at 4,689-4,750 ft. barren of oil and second Wilcox topped at 4,750 ft., also dry. Casing was perforated at 4,343-68 ft. but only water was recovered.

The above wells were all completions. Wells near completion included Atlantic Oil Producing Co. No. 2 Spangy, SE SE NW Section 6-6-4, was drilled to 4,610 ft., but casing was perforated at 4,272-90 ft. and 4,220-72 ft. and the column acidized with 3,500 gal. The well swabbed 340 bbl. in 10 hours and later swabbed 393 bbl. in 11 hours. Sunray Oil Co. No. 4 Swan, SE SE SE Section 12-6-5, had dolomite at 3,733-90 ft. which was acidized with 3,000 gal. It swabbed 50 bbl. in 10 hours and was to be put on the pump. Superior Oil Co. No. 1 Chippee, NW NE NW Section 13-6-5, was shot with 30 qt. at 2,715-25 ft. The well pumped 48 bbl. in 24 hours. H. L. Berkey No. 1-A Owens, NE SE SE Section 21-7-4, old total depth 3,515 ft., was drilled to 4,204 ft. and then plugged back to 4,050 ft. Casing was perforated with 100 shots at 3,660-85 ft. and the column acidized with 5,000 gal., with no results in production. The operation was shut down.

Kerlyn No. 1 School land, NW NW NE Section 36-7-3, total depth 4,244 ft., which had been acidized with 3,000 gal., swabbed 320 bbl. of oil and 117 bbl. of water in 24 hours.

Estimated Daily Production

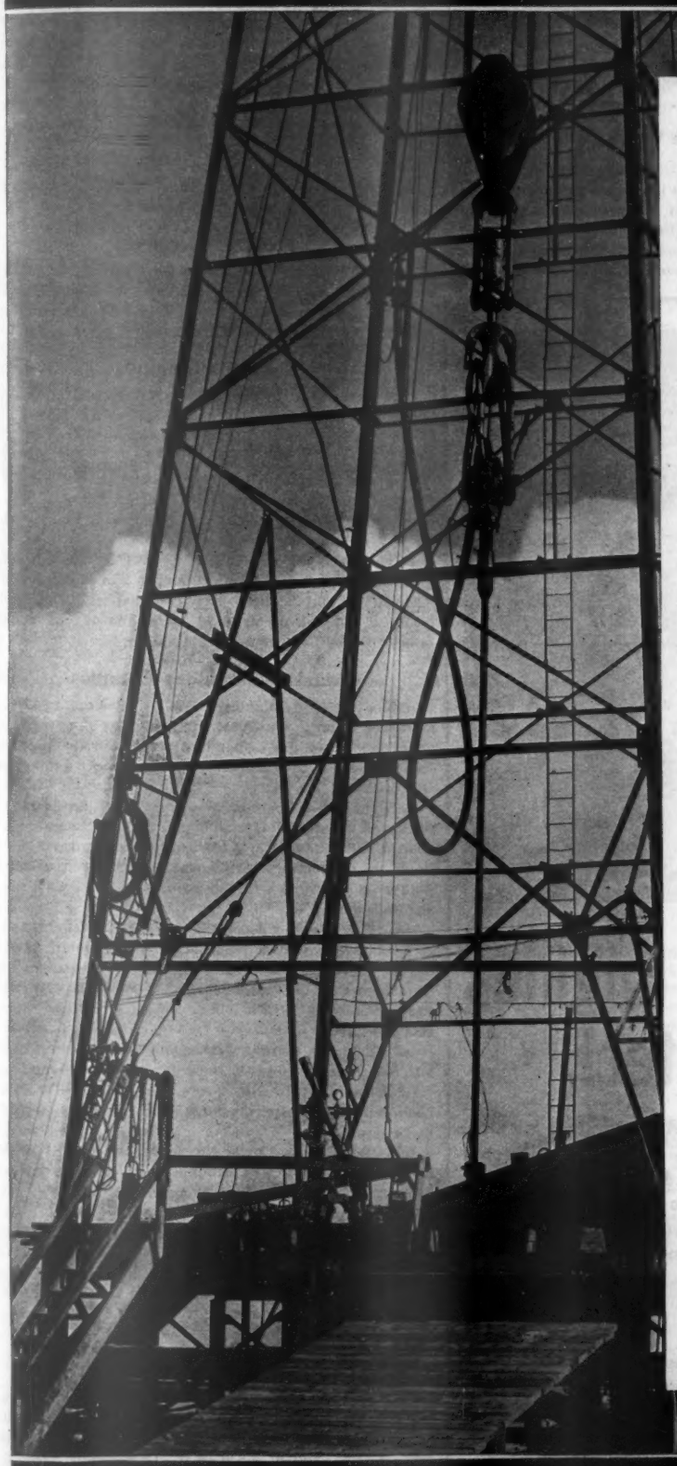
Estimated daily production for Oklahoma for the week ending July 1, and for the preceding week, was as follows:

	Barrels	
	July 1	June 24
Allen	7,250	7,125
Billings	6,850	6,375
Burbank	8,275	7,650
South Burbank	9,350	9,325
Balance Osage	18,250	17,500
Blackwell district	4,050	3,675
Bristow-Slick	7,925	6,800
Chandler	1,550	1,500
Crescent	3,250	3,050
Cromwell	3,225	3,125
Cushing-Shamrock	10,325	9,775
Duncan	4,350	4,275
Edmond	5,725	5,500
Fish	5,275	5,150
Fitts	25,200	26,225
Jesse	2,475	2,550
Graham-Fox	3,950	3,900
Gray	925	900
Healdton	9,200	9,175
Hewitt	4,025	4,050
Keokuk	3,650	3,625
Konawa	1,250	1,225
Lucien	9,775	9,125
Moore	2,875	2,850
Oklahoma City	90,800	108,125
Olympic	3,175	3,100
Ramsey	4,650	4,500
Sasakwa	1,375	1,375
Sholem-Alechem	2,925	2,850
Seminole district:		
Bowlegs	8,625	8,600
Carr City	3,000	2,975
Dora	3,575	3,600
Earlsboro	5,225	5,125
South Earlsboro	575	550
East Earlsboro	4,150	4,100
Little River	7,275	7,300
East Little River	800	775
Maud	775	750
Mission	1,600	1,550
Seminole	8,375	8,350
East Seminole	1,400	1,375
Searight	2,575	2,550
Total Seminole	47,950	47,600
St. Louis-Pearson	37,250	36,750
Tatums	2,100	2,075
Tonkawa-Garber-Thomas	4,275	4,125
Wewoka	2,250	2,225
Yale-Jennings	3,725	3,575
Other pools	92,500	88,000
Total Oklahoma	451,950	458,750

Hughes County

Cities Service Oil Co. No. 4 Fish B, SW NE SE Sec-

A STEADY DIET OF MUD AND OIL...



yet this

Thermoid Rotary Hose

drilled 12 wells

Operated by Mr. W. J. Walsh, this rig, equipped with a 2½" x 45' Thermoid Rotary Hose, drilled 12 wells to a 3,000 foot depth in the Kermit, West Texas, area. In addition to handling mud fluid for the regular drilling operations, this same Thermoid Hose was used for drilling in with oil on all twelve locations.

Mr. Walsh's experience is particularly significant when it is realized that ordinary hose has frequently given only one or two well service under the same operating conditions.

This report adds to the ever-growing tide of evidence that Thermoid Rotary Hose has the built-in strength for outstanding oil field service. In all fields Thermoid Hose has proved that it can withstand terrific punishment, and still turn in exceptional service records.

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tion 19-7-8, deepened from 3,116 ft. to 4,185 ft., total depth, had water in the Wilcox sand at 4,173-85 ft. It was plugged back to 4,182 ft., and pumped 331 bbl. of oil and 44 bbl. of water from the Wilcox. Later it pumped 376 bbl. of oil. Eason Oil Co. No. 2 Fish, SW SW SE Section 19-7-8, had Wilcox sand at 4,087-90 ft., flowed 181 bbl. in 4 hours and went dead. Later it swabbed water. The well was not a completion.

H. L. Berkey No. 1 Dowell, SW NE NW Section 33-8-4, a wildcat, had Wilcox sand at 4,595-4,613 ft., total depth. It was dry and the test was abandoned.

Pontotoc County

In the Fitts pool in Pontotoc County, Simpson No. 3 Statler, SW SE SW Section 34-2-7, was shot with 30 qt. at 1,849-64 ft., and flowed 265 bbl. of 33-gravity oil the first 24 hours.

Walker No. 1 King, SW SE NW Section 5-4-7, was dry in sand at 1,089-92 ft., and abandoned at 1,203 ft.

Clark No. 1 Harrell, SW SW SW Section 15-5-5, was completed at 2,429-94 ft. It was acidized with 3,000 gal. and produced 40 bbl. on the pump the first day.

Osborne No. 1 Harris, NE SE NW Section 35-5-7, was shot with 90 qt. in Gilcrease sand at 2,247-71 ft., and swabbed 84 bbl. initially, and was completed.

Hatcher No. 1 Sutton, NE SE NE Section 25-4-4, not completed, pumped 90 bbl. of oil and 90 bbl. of water in 22 hours from pay between 2,372 and 2,400 ft.

Culver No. 1 Burton, SW NW SE Section 3-5-5, not yet completed, flowed 250 bbl. of oil, pinched in, from sand at 2,662-68 ft. Senora Oil & Gas Co. No. 1 Osborne, SW SE SW Section 8-5-5, total depth 2,440 ft. had pipe perforated at 2,050-90 ft. and produced 15 bbl. in 24 hours.

Seminole County

Wood Oil Co. No. 3 Tiger, SE NW SE Section 2-8n-6e, Seminole County, had Viola lime at 4,085 ft., set 5-in. casing at 4,103 ft., had dolomite at 4,118 ft. and Wilcox sand at 4,145-71 ft. It was shot with 50 qt., and swabbed 111 bbl. in 22 hours, and will be put on the pump. It was not yet a completion. Same operator completed a failure in No. 1 Helm, NW SE NW Section 27-9-5, which was a hole full of water from Wilcox sand at 4,395-4,414 ft. It was abandoned.

Jackson County

R. O. Ray No. 3 Roland, NE SW NW Section 5-1s-19w, was completed after flowing 180 bbl. of oil through tubing at 2,516-60 ft.

Indian Territory Illuminating Oil Co. No. 1 Fillmore, SW SW SE Section 36-2s-19w, total depth 5,141 ft. in Arbuckle lime, flowed 58 bbl. in 24 hours and was to be tested on the pump. Oil Investment Co. No. 1-B Hamel, NE NW NW Section 6-5s-15w, had dry sand at 3,347-53 ft., and was shut down for orders.

Jefferson County

Star Oil Co. No. 1 Carmichael, NE NE SW Section 23-7s-7w, was shut down for orders at 4,046 ft.

McClain County

Indian Territory Illuminating Oil Co. No. 1 Lambert, C E½ NW NE Section 36-5-2, McClain County, was dry and abandoned at 5,716 ft. Second Wilcox sand at 5,680-97 ft., had spotted showings.

Stephens County

Carl Carter No. 18 fee, SE SE NE Section 26-1s-5w, Stephens County, was dry and abandoned at 585 ft.

Carter County

Magnolia Petroleum Co. No. 1 Nicholas, NE SE SW Section 9-4s-3w, Healdton field, Carter County, deepened from 1,098 ft. to 1,165 ft., pumped 7 bbl. of 33-gravity oil and 30 bbl. of water.

Allied Oil Co. No. 1 Pitkin, C SW NW Section 15-13-6, Lafoon pool, Lincoln County, had dolomite at 4,243-90 ft. and acidized it with 5,000 gal. The well swabbed 447 bbl. of oil in 11 hours and 47 bbl. in 20 hours. It was not yet a completion.

Okfuskee-Okmulgee Counties

Replogle No. 1 Lehmer, C SW SW Section 24-12-11, Okfuskee County, which was dry at 4,014-22½ ft., was abandoned after the owner had perforated the pipe at various depths up the hole and found no commercial showings.

Norman No. 1 Boehm, SW SW SW Section 24-12-11, Okfuskee County, old total depth 2,877 ft., was deepened to Wilcox sand at 3,598-3,623 ft., total depth, and found no production. Casing was perforated at various points up the hole with no results and the well was abandoned.

Browning No. 1 Adcock, SE NW SW Section 10-13-13, Okmulgee County, was dry in sand at 2,764-82 ft., and abandoned. In the Bald Hill district in Okmulgee County, Castleman No. 5 Cook, SW NW NE Section 25-14-14, was a 5-bbl. well after a 40-qt. shot at 1,070-1,140 ft.

In Muskogee County, Mussellem No. 6 Evans, SE NE SW Section 20-14-19, was dry and abandoned at 1,478-95 ft. Howard No. 2-A Mallory, CWL SW NW Section 33-15-15, after an 80-qt. shot swabbed 94 bbl. in 24 hours.

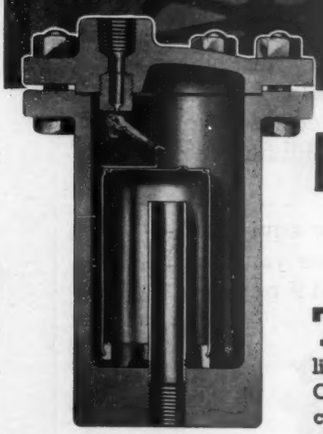
In Creek County Curtis No. 1 Hughes, NE SW NW Section 21-16-10, in the Mounds district, was dry at 2,925-27 ft. and abandoned. Strozier No. 8 Bierly, SW NW SW Section 12-16-11, had Red Fork sand at 1,691-1,778 ft., shot with 180 qt., it made a 35-bbl. initial production. Irelan No. 4 Farley, NE SE NE Section 13-17-10, had Red Fork sand at 1,863-85 ft. It was shot with 120 qt. and flowed 62 bbl. of oil in 2 hours. The 6-in. casing was recemented at 1,855 ft. The well was not yet a completion.

Logan County

In the Meridian field in Logan County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 2 Fruin flowed 540 bbl. per day through ½-in. choke from first Wilcox sand at 4,830-78 ft., total depth 4,890 ft. Texas Co. No. 2 Graham, C E½ SW SW Section 12-17-1e, flowed 700 bbl. in 24 hours from first Wilcox sand at 4,867-4,901 ft.

Tulsa County

Eppler No. 1 Boland, SW SW NE Section 18-18-14, Tulsa County, was dry and abandoned at 1,525 ft. It penetrated sands at 1,460-80 ft. and 1,485-1,520 ft. Knox No. 1 Walcott, SW NE NW Section 36-18-14, was a 10-bbl. pumper from sand at 958-1,009 ft., shot with 100 qt. Pepis No. 2-A Bishop, SW SE SW Section 35-19-12, deepened from 1,368 ft. to Wilcox sand at 2,065-70 ft., was a hole full of water and was abandoned.



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In Waggoner County, Dungan No. 2 McClure, C NE NE Section 12-18-17, made a 10-bbl. well after an 80-qt. shot at 250-62 ft.

Payne County

Quinlan No. 1 Duncan, SW SW SE Section 21-17-5e, Payne County, was dry in the Wilcox sand at a total depth of 4,101 ft. and was shut down. Mulberry Oil Co. No. 8 Bruyles, CNL NE NW Section 261-8-4, had Wilcox sand at 3,850-78 ft. and produced 5,000,000 cu. ft. of gas. It was completed.

Osage County

Sinclair Prairie Oil Co. No. 68, NW NW SE Section 12-21-8, Osage County, had sand at 591-621 ft. and was completed as a 3-bbl. well. Nadill No. 13, SE SE SW Section 19-25-9, is a 20-bbl. pumper at 2,298-2,304 ft.

Lincoln County

Stanolind Oil & Gas Co. No. 2 Martinek, C W½ W½ SE Section 35-13-5, Lincoln County, had Hunton lime at 4,257-63 ft. It was acidized with 400 gal. and flowed 652 bbl. in 10 hours, cut 25 per cent. Allied Oil Co. No. 1 Pitkin, C SW NW Section 15-13-6, was acidized at 4,243-90 ft. with 5,000 gal. It swabbed 447 bbl. in 11 hours and later swabbed 487 bbl. in 20 hours. Cooper Drilling Co. No. 1 Blaney, SW SW NW Section 15-14-5, was dry and abandoned at 3,859 ft. Inola sand was topped at 3,736 ft. and a drill-stem test was made at 3,759-77 ft., but four joints of oily mud was the sole recovery.

Grady County

Carter Oil Co. No. 1 Smith, C SE SW Section 25-6n-8w, Grady County, produced 13,000,000 cu. ft. of gas from various levels from 5,350 to 6,340 ft., total depth 6,620 ft.

Palmer No. 3 Dixon, NW SW NW Section 35-6n-10w, Caddo County, pumped 200 bbl. of oil from pay at 3,266-80 ft., total depth of the hole 3,471 ft.

C. M. Beckett No. 1 Stanifer, NE NE NE Section 25-7n-18w, Kiowa County, was shut down for orders at 1,200 ft. Shell Oil Co., Inc., was drilling below 868 ft. in conglomerate after setting 7-in. casing at 868 ft. in its west offset to Russell Tarr and others big well in SW SW NW Section 20-7n-17w, which got its production at 1,022-55½ ft., flowing 76 bbl. the first hour and 69 bbl. the second hour 2 weeks ago. It is shut in for lack of a market.

In the Oklahoma City field Indian Territory Illuminating Oil Co. No. 4 Canfield, NW SE SW Section 19-11n-2w, swabbed 571 bbl. in 12½ hours from Pawhuska lime at 3,074-85 ft., total depth. Later the well swabbed 560 bbl. in 8 hours, and was being put on the pump. It was not yet a completion.

In Kay County Tide Water Associated Oil Co. No. 1 Missell, SE SE NE Section 27-28-1w, Kay County, was drilling in Wilcox sand at 3,554 ft.

New Operations

New operations begun in the past week were as follows:

Pottawatomie County

Alma Oil and others No. 1 Simons, SW SE SE Section 28-7-5, drilling 2,770 ft.

Olsen Drilling Co. and others No. 4 Gillis, SE NW NW Section 5-10-4, spudding.

Yorkan Production Co. No. 1 Hoffman, NW NW NW Section 26-11-3, a wildcat test, building rig.

Halko-Myers No. 1 Sullivan, NE NE NW Section 32-7-4, setting casing at 60 ft.

William Clark No. 1 Brown, NE SW NE Section 15-7-4, drilling below 3,770 ft.

Neustadt No. 1 Howeth, NE SE NE Section 14-6-4, a wildcat, moving in material.

Pontotoc County

F. W. Cooper No. 3-A McKinley, NE NE NW Section 13-2-7, cellar and pits.

Chism & Gordon No. 2 Chism, NE SW SE Section 3-4-7, drilling 200 ft.

Simpson & Roodhouse No. 4 Statler, SE SE SW Section 34-2-7, location.

Okmulee County

Burke-Greis No. 1 Sharp, NE NW NE Section 6-14-11, rigging up standard tools.

Briscoe & McGuire No. 1 Morton, CSL SW SW Section 36-14-12, location.

Hendricks and others No. 12 Peavler, NE SW NW Section 35-15-14, cleaning out at total depth of 798 ft.

Creek County

Chapman and others No. 2 Allen, NW SE SE Section 35-15-10, location.

Martin and others No. 2 Perryman, SW NE NW Section 28-14-10, machine.

Viersen and others No. 1 Judeman, SW SE NW Section 24-14-10, rig.

Southern Oklahoma

Ray Stephens, Inc., No. 1 Pruitt, SW SE SE Section 22-6-10w, Caddo County, cellar and pits.

Ohio Oil Co. No. 9 Kune, SE SW SE Section 3-5-9e, cellar.

Magnolia Petroleum Co. No. 9 Pau-Kun, NW NE NE Section 10-5-9w, derrick.

Mathews & Thorp No. 2 James, NW SW NW Section 2-1-20w, Jackson County, rigging up rotary.

Mathews & Thorp No. 3 James, SE SW NW Section 2-1-20w, location.

Ohio Fields

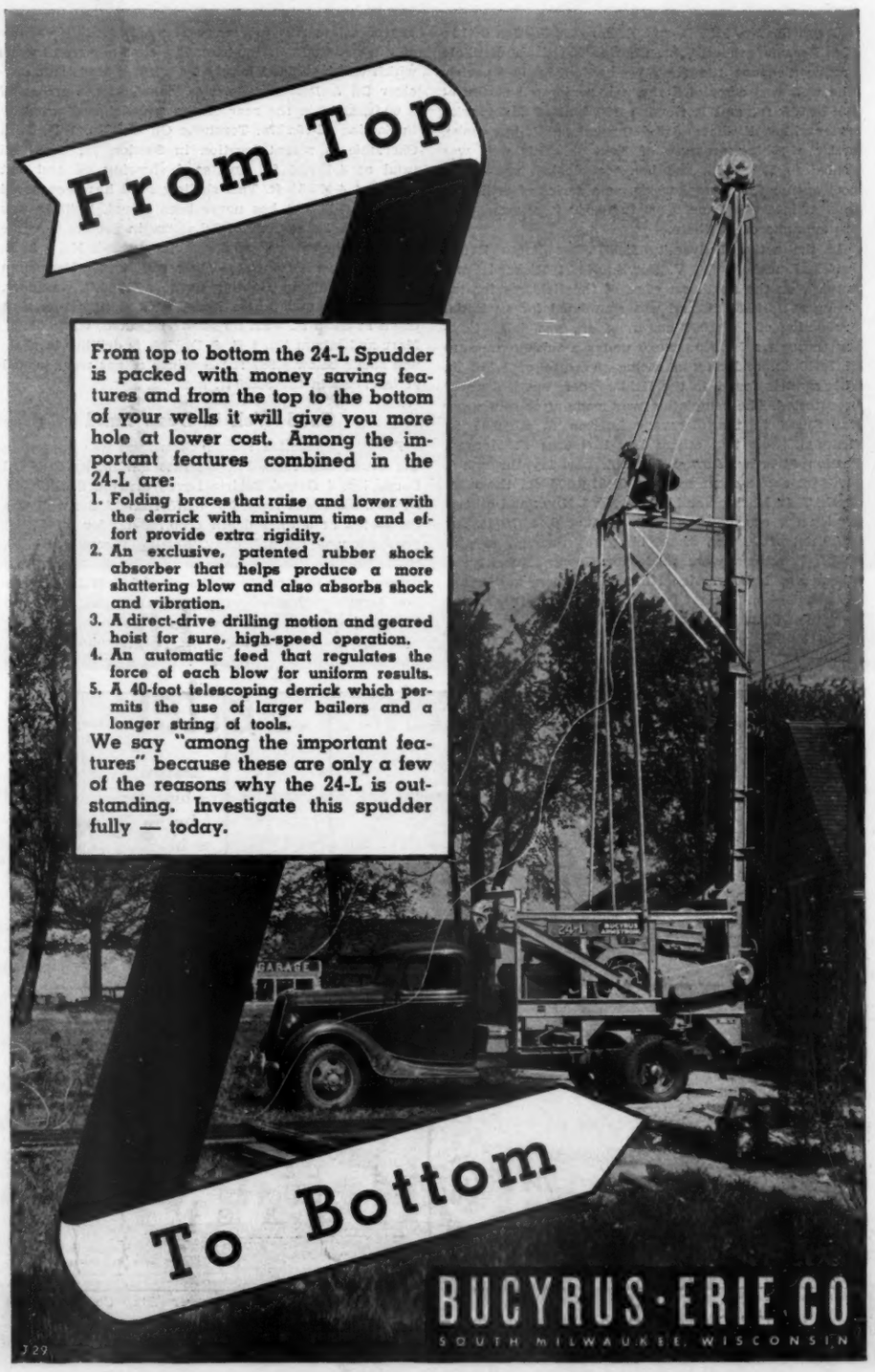
(Continued from Page 53)

tion 4, gaged 235,000 cu. ft. of gas in the lime and Injun; total depth 1,660 ft. Fairfield Township, H. F. McTaggart No. 1 I. B. Ermine, Section 12, made 50,000 cu. ft. of gas in the Berea sand at 1,802-05 ft.

The Tira Syndicate test in Adams County has been drilled 72 ft. below the Trenton without any commercial showings. The well is located in Franklin Township north of Potato Knob on Straight Creek on the Thomas Tira farm. Trenton was found at 1,545-2,063 ft., and Blue Lick water at 2,097-2,108 ft. It was undecided whether or not to drill deeper.

Sun Oil Co. No. 1 H. M. Cross test in Section 13, Plain Township, Wood County, is shut down temporarily at 2,060 ft.

Carl Blacksten and others are rigging up on the No. 1 E. J. Simms test, located 8 miles southeast of Columbus, in Section 15, Madison Township, Franklin County.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SOUTH MILWAUKEE, WISCONSIN

Texas and Louisiana Gulf

By
NEIL WILLIAMS

New Pools in Paradis, La., and Martha Area in Texas

HOUSTON, Tex., July 3.—The opening of distillate production on the Paradis prospect, St. Charles Parish, coastal Louisiana, and the apparent discovery of a new pool in the Martha area, Liberty County, Texas, featured developments in the Gulf Coast district the past week.

Texas Co. No. 1 L. L. and E. Paradis, Section 39-14s-20e, Paradis prospect, St. Charles Parish, a distillate producer, opens the first production in the parish. The well was completed through perforated casing at 8,985-9,915 ft., and is flowing 120 bbl. of 53.7-gravity water-white distillate daily through a ¼-in. choke, under a tubing pressure of 3,000 lb. This well was drilled to 10,787 ft., and has been looked upon as a pool opener for several weeks as a series of drill-stem tests at intervals from 9,400 to 10,080 ft. showed various amounts of distillate.

In the active University field, East Baton Rouge Parish, Louisiana, W. V. Bowles No. 1 Richard Community, on the northeast edge of the field, perforated casing at 4,340-52 ft. and was completed for an initial production of 1,000,000 cu. ft. of dry gas daily, flowing through a 5/32-in. choke under a tubing pressure of 1,610 lb. and shut-in casing pressure of 1,740 lb. This sand is found in the field proper, but has never been tested. The completion was made after salt water was found in the discovery horizon at 6,516-35 ft. George Echols and others No. 1 George F. Morgan, Section 68-7s-1w, flowed 400 bbl. per day through a 11/64-in. choke from sand at 6,481-6,506 ft., the total depth. T. G. Markley and others No. 1 Knox and others, Section 66, was completed in sand at 6,448-76 ft. for an initial production of 300 bbl. daily through a ⅛-in. choke. Locations were made for George Echols and others No. 1 University Hills subdivision in Section 68, and Lisbon-Iberia Oil Co. No. 3 D. A. Duplantier in Section 66.

The Chalkley field, Cameron Parish, was extended about a half-mile north as Humble Oil & Refining Co. completed No. 4 Bel Hanszen. With the hole bottomed at 8,672 ft., the casing was perforated at 8,650-70 ft., and the well flowed 297 bbl. daily through a ⅛-in. choke.

Drilling was started on three new tests in the Golden Meadows field, La Fourche Parish, bringing the number of active rigs to eight and making this field one of the busiest in the district. The first of several wells which will be drilled jointly by William Helis and Danciger Oil & Refining Co. was staked in the center of a 60-ft. strip in the rear of the school board property in Section 12-19s-27e. Terouche Oil Co. No. 1 D. & B. Cheramie, a recent location in Section 12, cored oil sand at 4,406-22 ft., and sand showing oil and salt water at 4,422-31 ft. This shallow sand has been cored in two wells, but has never been tested. Drilling was started on Texas Co. No. 2 Laterre in Section 6, while a canal is being dredged for the company's No. 2 L. L. and E. Golden Meadows. Northeast of Martex Petroleum Co. No. 1 Falgout Holding Corp., a 7,900-ft. producer, George Lilly and others No. 1 Jack Collins was shut down at 8,293 ft. with no shows reported, while M. H. Marr and others No. 1 B. & D. Unit is drilling in shale and shells below 8,887 ft. Showings of gas were logged at intervals in the 8,200-ft. horizon.

Good Well in Deep Sand

Prolific production from a deep sand was opened in the Grand Bay field, Plaquemines Parish, by Gulf Oil Corp., No. 4 Grand Prairie Levee district, Section 48-20s-18e. Sand was topped at 9,678 ft., and the well was completed at a total depth of 9,700 ft. for an initial production of 770 bbl. daily, flowing through a ¼-in. choke under a tubing pressure of 1,750 lb. and casing pressure 250 lb. Gravity of the oil tested 37.2°. Production heretofore has been developed from the 6,100- and 7,100-ft. horizons.

In the Quarantine Bay field, Plaquemines Parish, Gulf Oil Corp. was preparing to test a deeper sand logged in No. 10 State, Section 17-19s-17e. The hole is bottomed at 8,562 ft. and casing was cemented on bottom, to test through perforated casing at 8,545-57 ft. Should the test fail, the hole will be plugged back to the discovery horizon at 8,100 ft.

In the South Houma field, Terrebonne Parish, Shell Oil Co., Inc., completed No. 3 Peters for an initial production of 615 bbl. per day, flowing through a ¼-in. choke under a tubing pressure of 1,510 lb. and casing pressure 2,515 lb. The hole is bottomed at 10,316 ft., with 5½-in. casing cemented at 10,302 ft. This is the second producer in the field.

Operators interested in the Sparta-Wilcox trend were watching the results of a production test at Atlantic Refining Co. No. 1-A Rice Land & Lumber Co., Section 22-3s-11w, Beauregard Parish. Five and one-inch casing was cemented on bottom at 8,518 ft., and it is reported that several tests will be made in the Sparta and Wilcox formations. The Wilcox section was topped at 8,112 ft., and casing was cemented on bottom after an electrical survey was run. The only showing reported was a gas and distillate sand logged in the Sparta at 7,585-7,605 ft.

Another important Wilcox test is Continental Oil Co. and others No. 1 Mrs. Lillie Manuel, Section 32-7s-10w, Evangeline Parish. At the close of the week the hole was below 11,147 ft., and it is reported that the Wilcox section had not been topped.

Prospects of opening production from a new sand in a north outpost well in the Bancroft field, Beauregard Parish, were not encouraging as Republic Production Co. No. 1 Lutcher Moore tested salt water and some oil at approximately 7,898 ft. The hole has been plugged back to test another sand at 7,500 ft. and if it fails a test will be made in the discovery sand at 7,300 ft.

Prospect in Martha Area

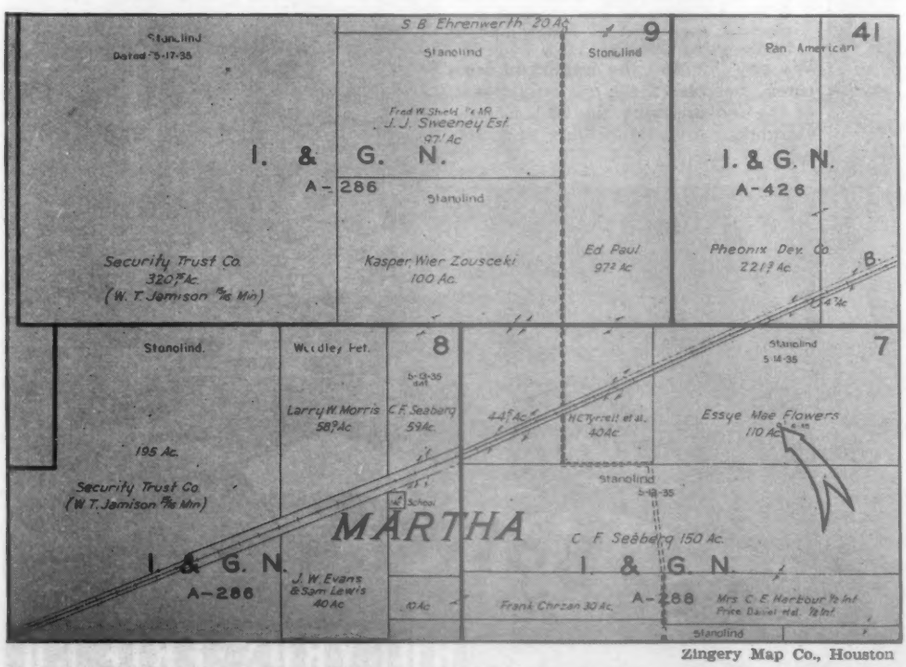
Along the Texas Coast Stanolind Oil & Gas Co. has apparently opened a new oil field in the Martha area, Liberty County, as No. 1 Effie Mae Flowers, I.&G.N. Survey No. 7, flowed at the rate of 400 bbl. of fluid per day, of which 70 per cent was 39-gravity oil and the balance salt water and mud. The test was made through a ¼-in. choke and tubing pressure was 1,120 lb. and casing pressure 1,580 lb. The well has been killed and the perforations at 8,104-08 ft., squeezed off to reperforate. This well was drilled to a total depth of 9,109 ft., and the above test was made after a previous one at 8,700-05 ft., recovered 100 per cent salt water. The 8,100-ft. sand has been identified as the lower Yeguaensis. The well was drilled on a block of several thousand acres, but close-in protection is held by Pan American Production Co. and Gulf Oil Corp.

On the south flank of the Hankamer field, Liberty County, new production was opened by the completion of Hatton Production Co. No. 1 Crow & Jacobs, H.&T.C. Survey 21. Sand was logged at 5,097-5,104 ft., and the well was completed for an initial production of 600 bbl. daily, flowing through a ¼-in. choke.

On the southeast flank of the Esperson dome, Liberty County, Sun Oil Co. was making preparations to test a new sand logged in No. 3-B Esperson. Casing was cemented on bottom at 7,694 ft., and a test will be made of a sand section near the total depth. This is the third well drilled in this area.

Locations were made for three wells in the South China field, Jefferson County, opened last week by Hebert, Smith and others No. 1 Fontenot. The well was completed through perforated casing at 7,875-85 ft., and flowed 102 bbl. of 39.5-gravity oil in 12 hours, through a 9/64-in. choke with tubing pressure 1,250

(Continued on Page 92)



Zingery Map Co., Houston

Stanolind Oil & Gas Co. No. 1 Flowers, a probable pool opener for the Martha area, Liberty County, Texas

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THE CONTINENTAL SUPPLY COMPANY

Illinois Fields

(Continued from Page 53)

Dean 2,343 ft., Cypress 2,616 ft., drilling 2,931 ft. Palacine Oil Co. and others No. 1 Old Ben Coal, NW NE NE Section 4-5s-2e, Glen Dean 2,195 ft., drilling 2,339 ft.

In Alexander County, Bean, Shirk and Morgan No. 1 Riggle, SE NW NW Section 35-15s-3w, set 42 ft. of 12¼-in. and was shut down.

In Hamilton County, Kingwood Oil Co. No. 1 Griswold, SE SE NE Section 29-6s-6e, rotary location. Heimerich & Payne No. 1 Hamilton County Land Bank, SE SE SE Section 6-4s-7e, cored at 3,304-23 ft. without a show of oil and was drilling at 3,403 ft.

In Perry County, G. H. Blankenship No. 1 Rheinelcker, NW NW NE Section 3-6s-4w, shut down 1,322 ft. Blankenship No. 1 Ruthowski, SE SE NE Section 13-4s-2w, drilling at 625 ft. Stevens and Ward No. 1 Albers, SE SE SE Section 32-4s-2w, shut down at 830 ft. Simmel No. 1 Kumsey, NW NE SE Section 5-5s-1w, was a location.

In Edwards County, Massad and others No. 1 Amy Toop, SE NW SE Section 13-3s-10e, moving in rotary tools. Longoria and others No. 1 Severns, SW NW NW Section 18-1s-10e, moving in rotary. McFadden No. 2 Bump, C SE SW Section 34-2s-14w, rigging up rotary.

In Monroe County, Crittendon and Nolkemper No. 1 Schroeder, C S½ SE NE Section 14-2s-10w, ran 469 ft. of 5⅞-in. casing to top of Trenton lime at 469 ft., total depth 533 ft., and getting ready to acidize. Cummings No. 1 Boyer, SE SW SE Section 19-1s-10w, total depth 880 ft., acidized with 1,000 gal. and was shut down for orders.

In St. Clair County, Carnegy and others No. 1 W. A. Winter, SE NW NE Section 13-3s-7w, drilling 600 ft. Shanafelt and others No. 1 Diehl, NW NW NW Section 3-1s-10w, drilling 980 ft.

Quincy Oil Co. No. 1-C Hester, SW NW NW Section 22-2n-2e, Marion County, total depth 2,147 ft., perforated with 70 shots at 2,111-28 ft., ran squeeze job, and was waiting on cement to set.

Wildcat Progress

In Brown County E. E. Goad and others No. 1 Hopke, NE NW NW Section 9-1n-4w of the fourth principal meridian, drilling at 135 ft.

In Tazewell County Morton No. 1 Strunk, NW NE SE Section 18-25n-3w, drilling at 1,275 ft.

In Ford County Nelson, Brown & Erp No. 1 Stroh, NE SE NW Section 19-24n-7e, drilling at 466 ft.

In Moultrie County George Anderson No. 1 Ulrich, C W½ W½ NW Section 29-15n-5e, set 33 ft. of 10-in. casing; drilling at 739 ft. Seaboard Oil Co. No. 1 Purvis, NE SW SE Section 9-13n-6e, Cypress 1,675 ft., Bethel 1,795 ft., Aux Vases 1,848 ft., Fredonia 1,889 ft. and was drilling without a show of oil at 1,891 ft.

In Coles County Marvin and others No. 1 J. H. Bell, SW SE SE Section 28-12n-7e, Chester 1,787 ft., Glen Dean 1,888 ft. and drilling at 1,900 ft.

In Christian County Meyer A. Marks No. 1 Ed Buhs, SE SW NW Section 13-11n-1w, drilling at 1,450 ft.

In Clark County W. R. Miller No. 1 Booth, SE NE NW Section 17-11n-14w, show of oil at 958-76 ft. in Carper sand; made 2 bailers of oil in 12 hours and was shut down for repairs at 1,100 ft.

In Cumberland County Carl Robinson No. 1 Brown, SW NE SE Section 1-9n-10e, set 696 ft. of 10-in. pipe; drilling at 755 ft. with 200 ft. of water in the hole.

In Montgomery County Jack S. Brown and others No. 1 C. W. Hefly, SW SE SE Section 4-9n-3w, set 120 ft. of 12½-in. pipe; drilling at 410 ft.

Among the Outposts

In Crawford County Downey and others No. 1 W. N. Cochran, SE SE NW Section 12-5n-12w, had a show of gas at 330 ft., ran 8-in. casing at 637 ft. and was drilling at 715 ft.

In Lawrence County M. G. Johnson No. 1 Downey, C E½ SE NW Section 22-3n-11w, shut down at 2,817 ft. Hutchinson No. 1 R. L. Patton, C S½ NW NW Section 34-3n-12w, set 978 ft. of 10-in. casing and was drilling at 991 ft. Kesi No. 1 Jones, approximately 330 ft. W of C Section 7-4n-10w, was drilling at 2,700 ft. Marks and others No. 1 Claff, SW SE SE Section 8-4n-10w, set 117 ft. of 12½-in. casing and drilling at 250 ft. Ullam & Russell No. 1 Jordan, NE NW NW Section 8-2n-11w, drilling 1,520 ft.

In Fayette County Texas Co. No. 1 E. G. McKee, SE SW NW Section 6-6n-3e, Golconda 1,410 ft., Cypress 1,515 ft., saturated sand 1,532-38 ft., set casing. Texas Co. No. 1 A. H. Yokel, NW NE SW Section 6-6n-3e, set 10-in. casing at 63 ft. and was drilling below 1,400 ft. Kewanee Oil & Gas Co. No. 1 McDonald, SE NE SE Section 13-7n-2e, Cypress sand 1,506 ft. and saturated sand from 1,535-47 ft.; rigging up standard tools. Nash Redwine No. 1 Sealock, SE NE NE Section 24-7n-2e, Cypress at 1,548-54 ft. and 1,560-83 ft., cored at 1,572-83 ft. and recovered fair saturation although some water appeared. They were running casing to make a test.

In Effingham County Kingwood Oil Co. No. 1 McWhorter, C E½ SW NW Section 15-6n-6e, was still testing at a plug-backed depth of 2,985 ft. and pumped 9 bbl. of oil and 23 bbl. water in 24 hours.

In Richland County Ohio Oil Co. No. 1 Chapman, SW SW NW Section 13-4n-9e, set 2,920 ft. of 7-in. casing, total depth 3,021 ft., squeezed 400 sacks of cement at 2,599 ft. Kitchen & Wilson No. 1 Wilson, SE SE SE Section 13-3n-9e, Menard 2,225 ft., Tar Springs 2,350 ft., and was drilling at 2,450 ft.

In Bond County Jenkins and others No. 1 White, SW SE NW Section 17-5n-4w, drilling below 100 ft. Bialock No. 1 J. J. Dilman, SW SE SW Section 13-6n-2w, moved in core drill and shut down at 933 ft. R. F. Anderson and others No. 1 John Morris, NW NW NW Section 16-6n-3w, spudded 50 ft. on a new hole and shut down. Devon Oil Co. No. 1 Ambuell, NE SW NW Section 22-6n-4w, was shut down for orders at 1,894 ft. W. N. Lee and others No. 1 Sharf, NE SW SE Section 27-7n-4w, rigged up machine and shut down.

In Marion County J. Booth and others No. 1 Groos, SW SW NW Section 34-3n-2e, set 86 ft. of 10-in. casing and was drilling at 263 ft. Menhall and others No. 1 Hazelwood, NE NE SW Section 8-2n-1e, Devonian test, was shut down for orders at 1,806 ft. Southwestern Oil & Gas Co. No. 22 Benoist, NE NE NE Section 8-2n-1e, Devonian test, set 8-in. casing at 1,300 ft. and were underdigging at 1,325 ft. Menhall and others No. 1 Benoist, C E½ NE NW Section 8-2n-1e, topped the Denvonian lime at 2,875 ft. and had pay at 2,919-23 ft.; the well flowed 686 bbl. of oil in 12 hours and was preparing to test further. Walker and others No. 1 Martin, SE SE SE Section 9-2n-2e, set 7-in. casing at 2,145 ft. after getting the McClosky at 2,092 ft. and perforating with 40 shots at 2,092 ft., water with a show of oil and gas, was recovered. Operators will acidize the well. Bowden No. 1 Martin, C S½ SW SW Section 10-2n-2e, total depth 2,665 ft., was preparing to drill ahead.

In Clay County J. W. Leonard and others No. 1 Raley, C SW NW SE Section 13-3n-7e, moving in rotary. Pure Oil Co. No. 1 Raymond C. Hubble, C E½ SE SE Section 31-3n-8e, rotary location. Minerva Oil Co. No. 1 John Smith, SW SW NW Section 23-5n-5e, 2,145 ft. with show of oil, Bethel 2,293 ft. with show, Aux Vases 2,333 ft. with show and McClosky 2,428 ft. There is a possibility that casing may be run to test shows. Hawley Oil Co. No. 1 Chandler, SW SW SE Section 12-3n-6e, rigging up rotary.

In Madison County Bill Morgan and others No. 1 C. L. Niggli, NE SE SE Section 2-3n-5w, set 105 ft. of 10-in. casing and drilling at 200 ft. Dr. R. E. Little No. 1 Tremont Layette, NE NE NE Section 27-3n-7w, shut down at 1,202 ft. E. L. Loper No. 1 F. Keller, SW SW NW Section 8-3n-8w, set 8-in. casing at 530 ft., 7-in. casing at 1,220 ft., topped the Devonian at 1,287 ft. with a reported show of oil and was shut down at 1,313 ft. May acidize show.

In White County, Eason Oil Co. No. 1 Starns Heirs, SW SE SW Section 14-6s-9e, waiting for cement to set after running retainer at 2,164 ft. and squeezing. Wilson and others No. 1 Dagley, SE SE SW Section 12-7s-9e, set 143 ft. of 10-in. casing. Mazda Oil Co. No. 1 Carmi Orphanage, SE NE SE Section 22-5s-9e, preparing to rip casing and shoot with 60 qt. at 2,863-88 ft. J. Ligget No. 1 M. How, NE NW SE Section 32-3s-14w, testing show of gas, oil, and water at 2,988 ft. Meyer & Marks No. 1 Smith, NW NW NE Section 14-5s-8e, derrick up. Anding and Nations No. 1 Belva McIntosh, C SE SW Section 31-3s-8e, swabbed 15 bbl. of oil in 2 hours and 20 minutes from a total depth of 3,405 ft. Operators were continuing to test.

In Randolph County, Ben Baumer No. 1 W. Evers, NE SW NE Section 5-7s-5w, show of oil at 729 ft., Cypress 839 ft., and show of oil at 840 ft.

In Wabash County, Hays and Phillips No. 1 A. and B. Schultz, 1,340 ft. S and 3,910 ft. W of C Section 7-3s-13w, McClosky at 2,873 ft., total depth 2,881 ft., 5½-in. casing at 2,865 ft., rigging up to pump. Phillips Petroleum Co. No. 2 Schultz, an offset to the above well, 1,340 ft. S and 3,168 ft. W of C Section 7-3s-13w, drilling at 270 ft. Eason Oil Co. No. 1 Schanf, NW SE SE Section 31-2s-13w, Cypress 2,470 ft., 7-in. casing 2,463 ft., total depth 2,486 ft. Ziegler and White No. 1 C. E. Schultz, SE NW SW Section 31-2s-13w, rig up. Continental Oil Co. No. 1 A. E. Schultz, NE SE SE Section 25-2s-14w, Ste. Genevieve 2,783 ft., show of oil at 2,799-2,804 ft., McClosky 2,836 ft., show of oil 2,835-37 ft., total depth 2,852 ft., and shut down for orders. Mammoth Producing & Refining Co. No. 1 William Dunn, NE SW SW Section 25-2s-14w, drilling at 1,100 ft. Bartlett No. 1 Gray, NW NW SE Section 30-2s-10w, Cypress 2,467 ft., total depth 2,481 ft., 7-in. casing 2,467 ft., drilled plug and well flowed 363 bbl. in 12 hours; operators were starting in to ream. Continental Oil Co. No. 1 Schultz, SE SE NW Section 30-2s-13w, Cypress 2,467 ft., with 7-in. casing set at same point. Two other wells in Section 30-2s-13w, were waiting for cement to set. They are Howell and others No. 1 Schultz, NW SW SE Section 30, and Magnolia Petroleum Co. No. 1 Meredith, SW SW NE Section 30. Both are preparing to test good shows of oil. Hughes No. 1 Tanquary Brothers, SW SW NE Section 31-1s-13w, drilling at 2,000 ft.

In Jefferson County, Magnolia Petroleum Co. No. 1 M. C. Davis, NE NW SE Section 22-3s-2e, Paint Creek 2,497 ft., and drilling at 2,640 ft. Shell Oil Co. No. 1 Jefferson Oil & Gas, NE NE SW Section 32-3s-2e, Glen Dean 2,062 ft., drilling at 2,070 ft. Kingwood Oil Co. No. 1 C. E. Cook, C W½ SE SW Section 18-3s-4e, Cypress 2,685 ft., drilling at 2,820 ft. S. W. McGee No. 1 Kaster, SW NE NE Section 9-1s-1e, set 45 ft. of 12½-in pipe, drilling at 125 ft. I. Vawter No. 1 S. Kell, NW SW NE Section 9-1s-1e, Bethel 2,073 ft., total depth 2,084 ft., reran 5½-in. casing to 2,043 ft. but did not get a shutoff. Operator will underream. Magnolia Petroleum Co. No. 1 E. L. Severs, SW SE NW Section 22-2s-1e, Ste. Genevieve 2,185 ft., 7-in. casing at 2,190 ft., drilled plug and got a hole full of water; recemented. Shendal and others No. 1 Sorenson, NE NE NW Section 5-2s-2e, Benoist 2,055 ft., showed water, ran 5½-in. casing at 2,040 ft., and underreaming at 2,153 ft.

In Clinton County, Witcher Development Co. No. 1 Monisen, NE NE SE Section 3-1n-2w, total depth 1,325 ft., plugged back to 1,320 ft., shot with 12 sticks of dynamite, cleaned out with no oil showing and was shut down for orders. Harris and others No. 1 Hage, C S½ SE SE Section 18-1s-5w, McClosky 981 ft., showed water, St. Louis 1,075 ft., drilling ahead. E. Goldschmidt No. 1 Burger, NE NE NW Section 12-2n-4w, lower Mississippi 1,205 ft., and drilling at 1,215 ft. with a hole full of water.

In Washington County, Pat Hardman No. 1 Rozanski, SW NW SW Section 19-3s-1w, drilling 220 ft. Max Conrey No. 1 Joint Stock Land Bank, SW SW NE Section 7-2s-4w, ready to run casing at 370 ft.

In Randolph County, Pendergast No. 1 Beattie, SW SW SW Section 11-5s-5w, drilling at 402 ft.

In Wayne County, Kenyon No. 1 Vaughn, SW NE NW Section 1-3s-8e, had derrick up. Illinois Mid-Continent Oil Co. No. 1 Vaughn Heirs, C N½ NE SE Section 2-3s-8e, spudded and shut down. Illinois Mid-Continent Oil Co. No. 1 Sarah Harris, NW SE NE Section 3-3s-8e, had derrick up. Pioneer Drilling Co. No. 1 Cuthbertson, NW SE NE Section 33-2s-7e, had rig up. Carl Robinson No. 1 Carter, SE NE NW Section 15-2s-8e, perforated with six shots at 3,315-25 ft., well showed water with some oil and gas, squeezed. New Penn No. 1 C. A. French, NW NW NW Section 14-2s-9e, shut down for orders at 3,437 ft. Porter No. 1 Klennicke, NE SE SW Section 15-2s-9e, Glen Dean at 2,735 ft., drilling 3,115 ft. Clark Brothers No. 1 Eureka School, SW SE SW Section 27-1s-7e, Weiler 2,940 ft., drilling 3,065 ft. A. J. Albright No. 1 Collins, NW NW SE Section 24-1s-9e, set 10-in. casing at 100 ft. Pure Oil Co. No. 1 Leo Nolit, C W½ NW SE Section 34-1n-7e, drilling 2,436 ft. Pure Oil Co. No. 1 G. Hubble, C E½ NW NE Section 9-1n-8e, Fredonia 3,042 ft., pay 3,043-50 ft. and 3,058-60 ft., drilling at 3,076 ft. Andy Bruner No. 1 Bothwell, SE NE SE Section 24-2n-7e, Rosiclare 2,958 ft., show of oil 3,063-76 ft., total depth 3,097 ft., with 5½-in. casing at 2,940 ft. Pure Oil Co. No. 1 S. Sturms, NE SE SW Section 19-2n-8e, Ste. Genevieve 2,967 ft., and drilling ahead at 2,979 ft. Centralia Refining Co. No. 1 Weiler School, SW SW SW Section 3-2n-8e, drilled cement and swabbed down at total depth of 3,025 ft.; had 50 ft. of fluid in the hole, estimated to be 75 per cent sulfur water, and was continuing to test. E. Davis No. 1 Fuse-Littel, NE NE NE Section 17-3s-9e, drilling at 1,902 ft.

In Gallatin County, J. Garfield Buell No. 1 Egyptian Fuel & Lumber Co., C N½ NW SE Section 16-8s-10e, flowed 15 bbl. of salt water per hour after ripping casing opposite Cypress at 2,418-27 ft., plugged back 2,204 ft. and perforated opposite Tar Springs at 2,083-87 ft., hole filled 1,200 ft. with salt water in 30 minutes, ran squeeze job.

Southwest Texas District

By
F. L. SINGLETON

New Minnie Bock Field in Nueces County Is Extended

CORPUS CHRISTI, Tex., July 3.—The completion of a third producer in the new Minnie Bock field, Nueces County, and the staking of several locations within the field, featured development of a comparatively quiet week in the Southwest Texas district.

Texas Conservative Oil Co. extended production in the Minnie Bock field, 1,200 ft. northeast, with the completion of No. 1 Bruno Bock. Oil sand was cored at 3,800-32 ft., and the well was completed through perforated casing at 3,812-18 ft., for an initial production of 115 bbl. daily flowing through a 9/64-in. choke under a casing pressure of 1,200 lb. and tubing pressure 775 lb.

At a hearing before the Railroad Commission the past week, operators in the above field recommended a 20-acre spacing program and straight acreage proration for all wells. The producing sand was identified as the Catahoula formation with the oil-water contact found in the first two wells at minus 3,764 ft., and the oil-gas contact at a minus 3,737 ft. It was estimated that the producing area will cover from 1,000 to 1,500 acres.

Locations for two more wells were made by Awoeb Oil Co. and others for Nos. 1 and 2 Minnie Bock, both being offsets to Texas Conservative Oil Co. No. 1-B Bock. This brings the number of operations in the field to eight. Interest is centered on Texas Conservative Oil Co. No. 1 Humble, 1 mile northeast of production, now drilling below 5,800 ft. in hopes of finding production in the Frio formation. This well defined the 3,800-ft. horizon, which carried salt water with a slight showing of oil.

Prospect in Jim Wells County

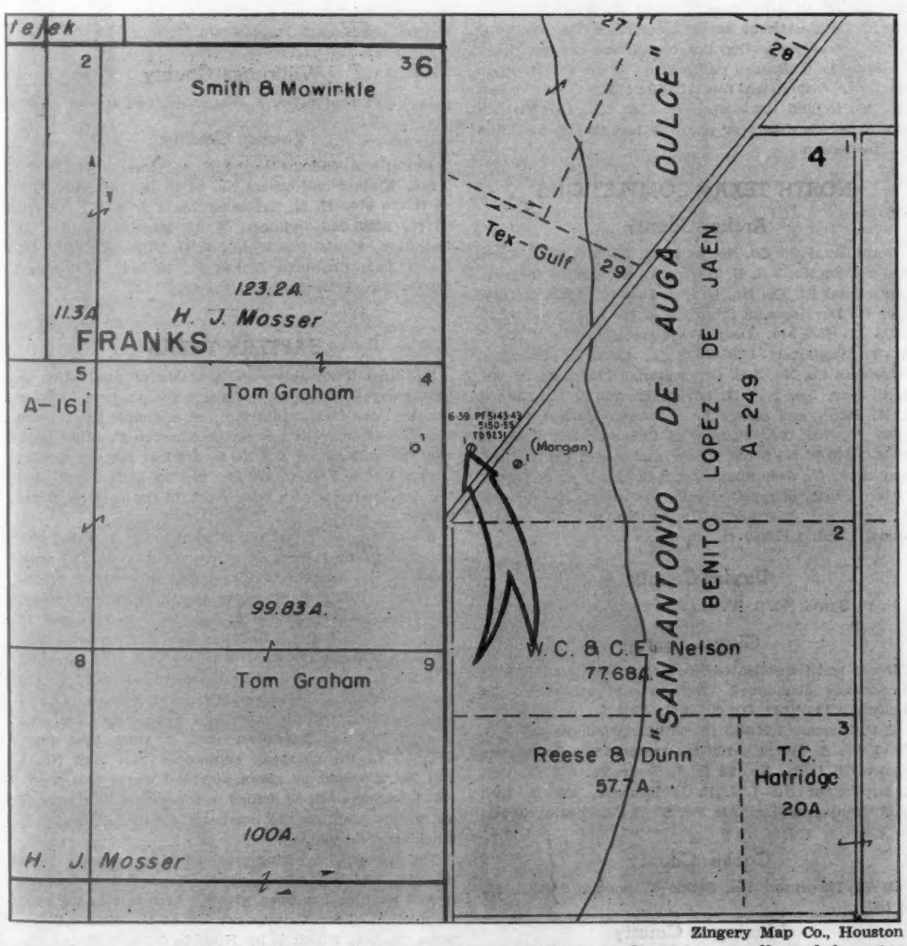
In Jim Wells County, interest was centered in a scheduled production test of W. R. Quinn and others No. 1 Pundt, generally looked upon as the discovery well of the Wade City pool, 3 miles north of Orange Grove in the T. C. Wright Survey No. 2. This well showed for a distillate producer on a drill-stem test at 4,739-45 ft., and 7-in. casing was cemented at 4,770 ft. After plugging back from a total depth of 5,417 ft., the cement was found soft due to a reported showing of oil coming from a sand at approximately 4,775-4,815 ft., and a short string of 5-in. casing has been cemented.

Two semiwildcats in the Ben Bolt area, Jim Wells County, were being watched. Pettus Oil & Refining Co. No. 1 Garcia, S.A.&M.G. Surveys Nos. 55 and 53, is coring below 5,300 ft., and no shows have been reported. H. H. Howell and others No. 1-A Lindsay & Reed, midway between the Ben Bolt and South Alice fields, is coring below 5,200 ft.

Texas Gulf Producing Co. No. 1 E. E. Miller, discovery well of the Reynolds field, 3 miles south of Orange Grove, has been completed for an initial production of 55 bbl. per day, flowing through a 7/64-in. choke. Tubing pressure was 1,500 lb. and casing pressure 1,800 lb. The well is producing through perforated casing at 5,143-49 ft. The rig is being moved 1,300 ft. northeast for No. 2-A Miller. Tom Graham and others No. 1 Mosser is shut down at a total depth of 3,200 ft.

In the same county, 1 mile north of the Armagosa gas field, Smith & Storey No. 1 Rowena Shaeffer is preparing to drill ahead after testing salt water through perforated casing at 2,194-2,204 ft.

Humble Oil & Refining Co. No. 3 Thompson, a wildcat in the Woodsboro area, Refugio County, has been abandoned at 6,500 ft. This well logged several encouraging showings at 5,800 and 6,100 ft., and additional development is expected. Drilling continues on three other important tests. Seven miles southeast of Woodsboro, Antonio Gallan Survey, Phillips Petroleum Co. No. 1 Hunsdon is drilling in shale below 4,300 ft., while midway between the Bonnieview and La Rosa fields, Phillips Petroleum Co. No. 1 Toland is drilling in shale below 4,825 ft. Hewitt & Daugherty No. 2-A Rooke, an outpost test in the La Rosa field, is coring for the sand below 5,800 ft.



Zingery Map Co., Houston

Plat of the new Reynolds field, Jim Wells County, showing discovery well and location of two new tests

Curtailment in McCampbell

Drilling activity in the McCampbell field, Aransas and San Patricio counties, is expected to be halted temporarily as the result of Atlantic Pipe Line Co.'s decision to curtail its pipe line runs approximately 40 per cent effective July 1. This, together with the recent Railroad Commission's order which reduced the field allowable approximately 3,000 bbl., or to 8,099 bbl. daily, has brought about a steady decline in drilling activity, and only five operations are reported. The field has been the most active in the lower Gulf Coast area since the first of the year, as the result of major extensions which have pushed production within the townsite of Aransas Pass. Locations for more than 40 wells were made in the townsite, but under the present conditions they are not expected to be drilled.

In Duval County, a mile east of the Fitzsimmons field, R. L. Wheelock and others No. 1 Serna was abandoned after testing salt water through perforated casing at 4,612-15 ft. Along the same trend and located in the Longhorn field, Miller & Sons No. 8 fee tested 150 ft. of mud and salt water in a deeper sand at 5,627-35 ft., and the hole has been plugged back and 5½-in. casing cemented at 4,928 ft., to test the regular sand at 4,000 ft.

Magnolia Petroleum Co. No. 6 Volpe, second well in the newly opened Volpe field, Webb County, is being rigged up to pump. It flowed 31 bbl. by heads in 6 hours through a ⅝-in. choke. The well is producing from the Mirando sand at 2,465-73 ft. This discovery has resulted in several wildcats along this trend. One mile southwest of the field, Houser & Campbell No. 1 Benavides, R. Benavides Survey No. 692, is drilling below 750 ft. Southwest of the field about a mile, V. G. Schimmel No. 1 Benavides, B.S.&F. Survey No. 693, was spudded.

In the Rincon field, ½ mile northeast of Transwestern Oil Co. and others No. 1 Cameron, recently completed as the first oil producer, Baldridge & Bessels No. 1 W. I. Cameron, George Smith Survey 228, is coring ahead after a drill-stem test at 4,239 ft. tested a small amount of oil and several hundred feet of salt water. The well is reported to be running over 100 ft. lower than the Transwestern producer.

Deep Dry Holes

Two deep tests in the Rio Grande Valley were

(Continued on Page 92)

North and East Texas

By
D. H. STORMONT

Extend Archer County Pools; Deeper Tests in Clay County

WICHITA FALLS, Tex., July 3.—Indicated extensions to two pools in Archer County, together with activity in Clay County's new wildcat sector and Montague County's recently discovered Burnett pool, led the developments of the week in the North Texxas district.

One-half mile west of the discovery well in the one-well Sikes pool of northern Archer County, Louis Sikes No. 1-A O. T. Anderson, J. S. Brock Survey, Abstract 17, headed 140 bbl. of oil through casing during the last 3 days of the week. The operator is running tubing for completion. The Sikes pool is 3½ miles northeast of the Hull-Silk pool.

A more than a mile due east extension for the Mazda sector, north extension area of the Hull-Silk pool, was seen at the Bert Ligon No. 1 Johnson, Block 1, H.&T.B. Survey. The wildcat cored 20 ft. of saturated sand and lime from 4,055-75 ft., and is drilling ahead toward the 4,300-ft. pay section of the area. This 4,050-ft. sand is the first pay section of the field and has several wells producing from it; the 4,300-ft. horizon has proven the most productive of the two.

The deep Strawn sand exploration campaign of Clay County, which has nine wildcat tests drilling in the search of deep production, was turned to the Frabor-Hodges Corp. and Mid-Union Drilling Co. No. 1 Lorena Kinder, Lot 11, Block 2, Clark & Plumb subdivision. This wildcat, in the extreme western part of the southern half of the county, drilled sand with shows of oil from 5,008-12 ft. where an electrical survey was made of the hole. The test then cored from 5,012 ft. to 5,023 ft. recovering 5 ft. of sand showing oil and 4 ft. of shale. The test is drilling toward contract depth in the Caddo lime which is the middle member of the Bend group, the Bend being just below the Strawn.

Clay County Wildcats

Three new wildcat tests are scheduled to start in Clay County while work has begun on two tests staked last week. E. Carlisle Norwood and associates have staked location for their No. 1 W. H. Shipley, 150 ft. N of center of S line of Block 29, Madison C.S.L., Abstract 302, in the northeastern part of the county. It is contracted to 5,000 ft. and is approximately 7 miles north of the Walter Gant 3,900-ft. pool. L. T. (Bobby) Burns, discoverer of the Browning pool and one of the leaders in Clay County's exploration campaign, has staked location for a ½-mile outpost to his Browning pool. Test will be No. 1 J. T. Pickett, 1,025 ft. from N and E lines of the Pickett 194½-acre tract in the W. W. Yearley Survey, Abstract 745. In the extreme northern part of the county, Consolidated Oil Co. has staked location for its No. 1 A. H. Bevering, 2,970 ft. N and 330 ft. W of the SE cor. of Block 9, B.B.B.&C. Survey, Abstract 69, approximately 1¾ miles south of the Red River. Jonn E. Farrell has announced that his No. 1 Claude Malone, Block 12, T.&N.O. Survey, wildcat about 5 miles southeast of Henrietta, will be carried to 6,000 ft. or the Ellenburger of lower Ordovician. It is drilling ahead below 5,026 ft.

Staley Oil Co. set surface pipe and was awaiting water supply for rotary rig on its No. 1 Percifield, proposed 5,000-ft. wildcat in Block 37, T. J. Belcher subdivision, T.E.&L. Survey, 6 miles southeast of the new Halsell 4,700-ft. Strawn sand pool opened by Bridwell Oil Co. several weeks ago. Youngblood & Foree and the Ramsey Petroleum Corp. were moving in materials for No. 1 Mrs. Ida Wynn, 660 ft. S and 330 ft. from E line of the NE¼ of Section 2, G. Gowan Survey, Abstract 1063, proposed 5,000-ft. wildcat 6 miles west of Bellevue. In the Halsell pool and approximately 1,000 ft. south of the discovery well, Bridwell Oil Co. is setting surface casing at its No. 1-B Halsell, in the A. Belcher Survey.

Completion of the second producer and the staking of a half-mile northeast outpost featured developments in the new Burnett pool of Montague County. The completion, second for the pool, was the Rogers & Rogers No. 1 Astley, Jacob Lenow Survey, north offset to the discovery. It gaged 118 bbl. of oil in 3 hours through ¾-in. choke on 2-in. tubing. This was a daily rate of 944 bbl. Production is through 20 perforations in the casing from 4,649 ft. to 4,669 ft. The discovery well in the pool flowed 523 bbl. of oil through ½-in. choke in 24 hours. Half-mile northeast of the pool, Youngblood & Foree, who started the discovery well in the pool and before completion sold out to Rogers & Rogers, staked their No. 1 Ruth and Kate Davis, 330 ft. from S and 142 ft. from E and W lines of a 6-acre tract in the J. D. Jennings Survey, Abstract 389.

Cooke County

With seven wells completed from the discovery 4,900-ft. horizon and two wells completed from the second and deeper 5,150-ft. horizon, the Walnut Bend field of northern Cooke County was in line for a third and deeper pay section from the Simpson of Upper Ordovician. Sinclair Prairie Oil Co., discoverer of the field, also discovered the second pay horizon some 4 weeks past when the No. 8 Best was completed for 214 bbl. of oil daily from 5,141-73 ft. The company's No. 10 Best, extreme southeast cor. of Thomas Toby Survey, was preparing for completion as the week closed. The indicated pay section is in the Simpson of Upper Ordovician from 5,310-24 ft. Casing is set at 5,286 ft. and total depth is 3,565 ft., plugged back from 5,643 ft. Operator plans to test the entire Simpson formation.

NORTH TEXAS COMPLETIONS

Archer County

Continental Oil Co. No. 58 Gose, 1,600 ft., dry. Cochran & Cain No. 3 S. B. Herron O, abandoned location. Continental Oil Co. No. 8 A. J. Demoss, 1,025 ft., dry. Deep Oil Development Co. No. 1 W. T. Waggoner, 4,270-4,303 ft., 656 bbl. Deep Oil Development Co. No. 2 W. T. Waggoner, 4,385-4,439 ft., 1,352 ft. Hamilton Petroleum Co. No. 3 B. Carrington, 1,171-96 ft., 37 bbl. R. C. Hart No. 1 J. D. Carpenter, 903-09 ft., 15 bbl. C. H. Staley and others No. 14 Anna Mangold, 3,780-3,865 ft., 700 bbl. Palmer & Chenault No. 9 D. L. Wolf, 1,345-56 ft., 5 bbl. Riner and others No. 1 Virgil Seay, 1,162 ft., dry. Shappell Oil Co. No. 1 C. E. Carter, 1,860 ft., dry. Shappell Oil Co. No. 2 C. E. Carter, 926 ft., dry. Van Warmer & Boller No. 9 Falls County School Land, 1,179-80 ft., 15 bbl.

Baylor County

E. P. Bowel No. 1 W. H. Portwood, 1,461 ft., dry.

Clay County

Burns and Consolidated No. 1 G. A. Scaling, 4,545 ft., temporarily abandoned. Duncan and others No. 11 Duncan, 1,184-1,211 ft., 205 bbl. Ted A. Norwood No. 6 T. P. Duncan, 1,206-15 ft., 90 bbl. Shell Oil Co., Inc., No. 1 W. A. Davis, 5,100 ft., temporarily abandoned. Sussex Oil Corp. No. 23 C. J. Shumake, 437 ft., dry. J. M. Tanner No. 1 J. B. L. Hansard, 262 ft., dry. J. M. Tanner and others No. 10 G. D. Rigsby, 200-24 ft., 1 bbl.

Cooke County

B. F. Thompson No. 5 Joe Wiesman, 890-927 ft., 12 bbl.

Montague County

Bridwell Oil Co. No. 1 H. A. Reynolds and others, 5,403 ft., dry. E. B. Madden No. 1 Harry Smith, 3,552 ft., junked. Cordova Union Oil Co. No. 1 R. L. Cable, 4,550 ft., dry.

Foard County

Texas Co. No. 18 L. K. Johnson, 3,537-3,692 ft., 72 bbl.

Jack County

Compton Oil Co. No. 2 Charles Henderson A, 320-39 ft., 8 bbl. McCutchin and others No. 2 J. R. and C. P. Clayton A, abandoned location.

Wichita County

Magnolia Petroleum Co. No. 4 S. M. Daniel, 1,285-1,322 ft., 6 bbl. James S. Smith No. 1 W. L. Doyle, 503 ft., dry. M. Staniforth No. 3 E. Reilly, 1,348-70 ft., 170 bbl. Buffalo Oil Co. No. 6 W. P. Ferguson, 3,725-3,968 ft., 808 bbl. Curtis & Caraway No. 2 Mrs. J. James, 3,929-60 ft., 600 bbl. Deep Oil Development Co. No. 5 Bradley, 3,686-3,800 ft., 440 bbl. Hanlon-Buchanan, Inc., No. 10 Fassett & Tuttle, 3,845-4,260 ft., 48 bbl. T. F. Hunter No. 46 Waggoner Brothers A, 1,360-82 ft., 15 bbl. King Oil Co. and Perkins-Cullum No. 19 Charles Pettit, 3,693-3,790 ft., 705 bbl. Moran Brothers, Inc., No. 3 Waggoner Brothers D, 3,800-54 ft., 711 bbl. Pace Petroleum Co. No. 9 A. B. Edgerly A, 624 ft., dry. George Proctor No. 35 Ed Foster A, 1,611-27 ft., 436 bbl. C. W. Schroeder No. 1 B. N. Ferguson, abandoned location. Shell Oil Co., Inc., No. 5 N. C. Griffin, 3,828-3,935 ft., 128 bbl. 7 hours.

Wilbarger County

L. V. Fitzwater No. 3 Waggoner, 660 ft., dry.

Young County

Horwitz & Oldom No. 11 F. C. Green, 672-720 ft., 5 bbl. Kleiner and others No. 64 C. W. Langston, 558-85 ft., 10 bbl. H. M. Leidecker No. 1 J. M. Nail, 4,448-65 ft., 1,225 bbl., wildcat. N. H. Martin No. 9 G. B. Hamilton, 838-74 ft., 5 bbl. J. O. Tilley Drilling Co. No. 2 Zada Chapman, 529-58 ft., 10 bbl. Underwood Oil Co. No. 1 Benson, 943 ft., dry.

EASTERN TEXAS

DALLAS, Tex., July 3.—Extension of production in Henderson County's new Mabank pool, a new location for the Leon County portion and a completion for the Houston County portion of the Navarro Crossing pool, and the staking of a 4,000-ft. wildcat test in Collins County and a 5,000-ft. wildcat test in Ellis County led the developments of a busy week in the eastern Texas district.

A small extension of the Mabank pool, its third producer, and the staking of a new location in the area, featured the activity in that pool. Richards & Holloway, Inc., No. 2 Bauguss, in the J. Gardner Survey, 600 ft. southwest of No. 1 Bauguss, was reported to have cored into the Woodbine sand at approximately 3,151 ft. Operators cored 4 ft. of saturated oil sand to 3,155 ft. where drilling was suspended to set casing for completion. The company's No. 1 Bauguss flowed approximately 60 bbl. of oil in 4 hours when the plug was drilled and has been shut in since that time. Officials of the company announced that both No. 1 and No. 2 would be given potential gages this week. No. 3 Bauguss will be drilled in the southeast corner of an 80-acre tract in the northeast corner of the D. O. Muckleroy Survey.

The Navarro Crossing pool of Houston and Leon counties, which has been greatly expanded during the past 6 months, has been given a new test and a new completion. Leon County portion of the field will receive the test which is by Humble Oil & Refining Co. as its No. 1 George Hailey, south of Humble and Sun

(Continued on Page 82)

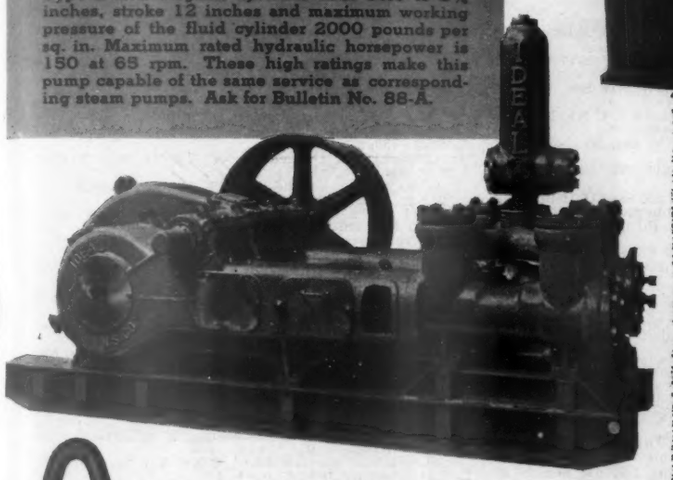
NEW IDEAL ROTARY EQUIPMENT

"Reg. U. S. Pat. Off."

FOR THE SHALLOWER FIELD

TYPE C-150 POWER DRIVEN SLUSH PUMP

Built to render the same high standard of drilling efficiency as the larger pumps of the Ideal Type C line. Regular cylinder liner bore is 6¾ inches, stroke 12 inches and maximum working pressure of the fluid cylinder 2000 pounds per sq. in. Maximum rated hydraulic horsepower is 150 at 65 rpm. These high ratings make this pump capable of the same service as corresponding steam pumps. Ask for Bulletin No. 88-A.



IDEAL TYPE GS AND GSB SWIVELS

These swivels follow a basic design which has been proven through many years of field service. Type GS is built in 4" and 6" sizes, Type GSB in 4" only. Both types are recommended for service in shallow or moderate drilling areas. Ask for Bulletins No. 155 and No. 214.

THE IDEAL FE-17½ ROTARY MACHINE

A fully enclosed oil bath type rotary machine for drilling up to 5000 feet with 4½ inch drill pipe. Its advanced features and ability to operate at higher speeds give it a broad service range for shallow as well as medium depths. The table opening is 17½ inches and net weight less table guard is 6759 pounds. Complete information is available in Bulletin No. 210.

THE IDEAL TYPE D-6 CROWN BLOCK

A single shaft four sheave rotary crown block with a safe working load capacity of 160,000 pounds. Sheaves are carried on double row individually lubricated Timken roller bearings which eliminates the necessity of spacers and permits a shorter span.

THE IDEAL TYPE D-6 TRAVELING BLOCK

A narrower and shorter streamlined block which saves head room in the derrick and operates safely at the highest speeds. It is of the three sheave type and has a rated capacity of 60 tons. Over-all width is 16⅞ inches due to elimination of spacers, and length is 55¾ inches. Its new and improved features are described in Bulletin No. 242.

THE IDEAL TYPE D-6 ROTARY HOOK

A hook designed especially for light rotary drilling requirements. It is narrow and streamlined in construction and the spring and locking mechanisms are completely enclosed. The hook member is of the closed link design and is automatically closed and locked in position when the swivel bail is engaged. Other features include a device that locks the hook in multiple positions. For further description ask for Bulletin No. 243.

NSCO
REG. U.S. PAT. OFF.

NATIONAL

THE NATIONAL SUPPLY COMPANY

THE NATIONAL SHIELD
SYMBOLIZES DEPENDABLE EQUIPMENT

EXECUTIVE OFFICES: PITTSBURGH, PA.
GENERAL SALES OFFICE: TOLEDO, OHIO

DIVISION OFFICES: FT. WORTH, TEXAS;
TULSA, OKLA.; TORRANCE, CALIF.

Rocky Mountain Area

By
T. R. INGRAM

Rocky Mountain States Have Quiet Period; Few New Wells

DENVER, Colo., July 3.—The northern Rocky Mountain area had an uneventful week with only one completion in Wyoming and three in Montana. There were none in Colorado. Wyoming had two new operations, one in Lance Creek in the Continental Oil Co. No. 10 Rohlff, and a shallow well in Osage. Montana had six new wells starting, of which three were in Cut Bank and three in Kevin-Sunburst. Montana had three wildcats abandoned, these being the Zodiac Oil Co. test in Teton County. The Montana Gas Corp. No. 1 Campbell, on the Bow and Arrow structure, and R. C. Tarrant No. 2 Kelly, on the Mosser dome in Yellowstone County.

NEW MEXICO

Only one completion in the Vacuum area of Lea County was reported for the week, that being Shell Oil Co. No. 3-N State, C SW NE Section 28-17s-35e. Top of pay was found at 4,500 ft., and the well flowed 105 bbl. of oil in 8 hours, naturally, with 376,000 cu. ft. of gas daily. Total depth was 4,681 ft.

Ralph Olsen Oil Co. No. 1 Langlie, SE NW NW Section 10-25s-37e, Langlie pool, found pay from 3,396-3,434 ft., and flowed 70 bbl. of oil through open tubing in 5 hours. Total depth was 3,440 ft.

Humble Oil & Refining Co. No. 1-L State, C NE SE Section 32-24s-37e, Mattix area, swabbed and flowed 60 bbl. of oil daily, cutting 66 per cent water, from pay at 3,430 ft. The well was bottomed at 3,560 ft. and was plugged back to 3,551 ft.

Anderson-Prichard Oil Co. No. 2 State A-32, C SE NW Section 32-24s-37e, was completed naturally for 22 bbl. of oil per hour through choke on 2-in. tubing set at 3,528 ft. Gas gaged 1,000,000 cu. ft. daily. Top of pay was 3,535 ft., total depth was 3,539 ft.

Great Western Production Co. No. 3-B Leonard, SW NE NW Section 32-23s-37e, Skelly pool, had top of pay at 3,530 ft., total depth at 3,564 ft., and flowed 150 bbl. of oil in 24 hours with 600,000 cu. ft. of gas.

Humble Oil & Refining Co. No. 1 Hardison, C SW NE Section 34-21s-37e, Hardy area, flowed 62 bbl. of oil daily from top of pay reached at 3,660 ft. Total depth was 3,730 ft.

Magnolia Petroleum Co. No. 1 Selby, C NW NE Section 7-17-37, South Lovington area, encountered water at total depth of 5,026 ft. and was dry and abandoned.

One completion for the week in Eddy County was B. L. Arnold No. 1-B Arnold, NW NW NW Section 34-17s-30e. The well flowed 30 bbl. of oil daily through open 2-inch tubing set at 3,271 ft. Pay was topped at 3,297 ft., total depth was 3,360 ft.

Lea County

Magnolia Pet. Co. No. 1-S State, C NE SW Sec. 34-16-34. Drlg. 5,211 ft.
Amerada Pet. Co. No. 2 State, C NE SW Sec. 1-17-36. Drlg. 4,606 ft.
Barnsdall Oil Co. No. 1 Caylor, C NW NW Sec. 6-17-37. W.O.C. 400 ft.
Drlg. & Exploration No. 2 State, SE SE SW Sec. 22-17-35. Rng. csg. 1,710 ft.
Drlg. & Exploration No. 1-E State, C SW SE Sec. 24-17-34. Drlg. 2,584 ft.
Drlg. & Exploration No. 1-O State, NE NW NE Sec. 34-17-34. W.O.C. 4,297 ft.
Phillips Pet. Co. No. 2 Mable, C NW NW Sec. 35-17-34. T.D. 4,655 ft.; 300 ft. F.I.H.
Phillips Pet. Co. No. 30 Santa Fe, C SW NW Sec. 26-17-35. R.U.R.
Shell Oil Co. No. 3-N State, C SW NE Sec. 28-17-35. Drlg. 3,980 ft.
Humble O. & R. Co. No. 6-K State, C SE SE Sec. 32-17-35. Drlg. 3,228 ft.
Paul Love No. 3 Pearsall, C NW NW Sec. 33-17-32. Drlg. 2,600 ft.
Magnolia Pet. Co. No. 34 State-Bridges, C SE SW Sec. 14-17-34. W.O.C. 4,390 ft.
Magnolia Pet. Co. No. 35 State-Bridges, C NE SW Sec. 26-17-34. Drlg. 4,060 ft.
Magnolia Pet. Co. No. 36 State-Bridges, C NW NW Sec. 25-17-34. Drlg. 3,915 ft.
Magnolia Pet. Co. No. 2-R State, C NE SE Sec. 1-17-36. Drlg. 4,681 ft.
Maljamar O. & G. Co. No. 2-B Baish, C NE NE Sec. 27-17-32. T.D. 3,996 ft.; W.O.C.
Maljamar O. & G. Co. No. 2 Mitchell, SW SE SW Sec. 5-17-32. T.D. 4,498 ft.; gas sd.
Ohio Oil Co. No. 3 State-Warn, C SW NE Sec. 33-17-35. Drlg. 2,944 ft.
Shell Oil Co. No. 2-N State, C SE NE Sec. 28-17-35. Drlg. 4,422 ft.
Skelly Oil Co. No. 1-P State, C NW NW Sec. 33-17-35. Rng. csg. 4,120 ft.
Standard of Texas No. 4 State Lease 5, C NE NW Sec. 27-17-35. T.D. 4,610 ft.; rng. tbg.
Texas Co. No. 4-N State, C NW NW Sec. 30-17-35. Drlg. 3,040 ft.
Texas Co. No. 2-V State, C NE SW Sec. 34-17-34. C.&P.
P. B. English No. 1 Miller, C NE SE Sec. 18-19-32 (wildcat. T.D. 3,800 ft.; rng. Schlumberger.
Continental Oil Co. No. 7 Britt B-15, C W½ SE SW Sec. 15-20-37. R.U.R.
Phillips Pet. Co. No. 4 Hobbs, C SE SW Sec. 18-20-37. T.D. 3,565 ft.; F. 12 B.O.P.H.; F. 24 B.O.P.H.
Aloco Oil Co. No. 3-B Carson, C NW NE Sec. 33-21-37. W.O.C. 3,631 ft
Danglade & Clower No. 2 Owen, C W½ NW SW Sec. 34-21-37. T.D. 3,755 ft.; pay 3,685 ft.
Magnolia Pet. Co. No. 3 Marshall, C NW NW Sec. 34-21-37. Drlg. 3,510 ft.
Skelly Oil Co. No. 2-K State, C NW NW Sec. 32-21-37. Drlg. 3,210 ft.
Stanolind O. & G. Co. No. 5-C Hill, C NW NE Sec. 5-21-37. S.O.&G. 3,695 ft.; drlg. 3,714 ft.
Wilson Oil Co. No. 1 Shell-State, C NE SW Sec. 7-21-35. Loc.
Cities Service No. 1-N State, NE SE SW Sec. 2-22-36. W.O.C. 322 ft.
J. C. Clower No. 2-B Christmas, SE NE SW Sec. 28-22-37. Drlg. 2,060 ft.
Devonian Oil Co. No. 2 Christmas, SW SW SE Sec. 28-22-37. Loc.
Gulf Corp. No. 6-E Mattern, SW SE NW Sec. 12-22-36. T.D. 3,765 ft.; F. 119 B.O. in 24 hrs.
Gulf Oil Corp. No. 7-E Mattern, SW SW NE Sec. 12-22-36. Drk.
Osage Drlg. No. 1 Christmas, NE NE SE Sec. 17-22-37. B. roads.
Peters & Elder No. 3 Brunson, SW SW SW Sec. 3-22-37. C.&P.
Repollo Oil Co. No. 3 State Lease 157-D, NW NW SE Sec. 12-22-36. W.O.C. 3,655 ft.
Lem Peters No. 3 T. O. May, SW SW NE Sec. 34-22-37. Spd.
Texas Pacific C. & O. Co. No. 17-A State, SE SE NE Sec. 11-22-36. Drlg. 3,454 ft.
Anderson & Prichard No. 2 Blinebry, C SE SW Sec. 29-23-37. Rng. csg. 1,230 ft.
Continental Oil Co. No. 2 Lynn A-28, C NW SE Sec. 28-23-36. T.D. 3,654 ft.; F. 12 B.O.P.H.
Culberson & Irwin No. 1 Carter, C NE NE Sec. 25-23-36. M.I.R.
Great Western Prod. No. 4-B Leonard, C SE NW Sec. 32-23-37. Loc.
Skelly Oil Co. No. 4 Simms, SW NE SE Sec. 3-23-37. T.D. 3,660 ft.; will not F.; S.D.O.
Skelly Oil Co. No. 2-A King, C NW SW Sec. 33-22-37. Drlg. 1,126 ft.
Addison Oil No. 4 Knight, C SE NW Sec. 27-24-37. W.O.C. 3,205 ft.
Anderson & Prichard No. 1 State B-32, SW NW SE Sec. 32-24-37. Drk.
Continental Oil Co. No. 2 Jack A-29, NE NE SE Sec. 29-24-37. Drlg. 1,600 ft.
Continental Oil Co. No. 4 Jack B-27, C W½ SE NE Sec. 27-24-37. R.U.R.
Continental Oil Co. No. 5 Jack A-20, Sec. 20-24-37. T.D. 3,574 ft.; tstg.
Culberson & Irwin No. 1 Martin, SE SE NE Sec. 31-24-37. Spdg.
Gulf Oil Corp. No. 2 Carr, C SW NW Sec. 10-24-37. W.O.C. 270 ft.
C. B. King No. 1 Harrison, C SE NW Sec. 30-24-37. Drlg. 3,471 ft.
Phillips and Pure No. 8 Woolworth, C NW NE Sec. 33-24-37. W.O.C. 3,360 ft.
Repollo Oil Co. No. 4-B Whitten, NE NE SE Sec. 4-24-36. T.D. 3,765 ft.; P.B. 3,660 ft.; S.D.O.
Schermerhorn Oil Co. No. 7 Woolworth, C SE SE Sec. 28-24-37. Drlg. 3,153 ft.
Skelly Oil Co. No. 2-M State, C NW SW Sec. 32-24-37. W.O.C. 136 ft.
Weier Drlg. Co. No. 4 Woolworth, SE NW SW Sec. 28-24-37. Drlg. 3,150 ft.
Anderson & Prichard Oil Corp. No. 9 Wells, C SW NE Sec. 6-25-37. Drlg. 1,590 ft.
Hershback Drlg. Co. No. 1 Woolworth, NE NE SW Sec. 8-25-37. C.&P.
Hershback Drlg. Co. No. 2 Burleson, C E½ SE NW Sec. 8-25-37. Drlg. 1,000 ft.
Parker Drlg. No. 1-B State, C W½ NE NW Sec. 2-25-37. Drlg. 3,065 ft.
Richmond Drlg. No. 3-A State, C SE SW Sec. 2-25-37. T.D. 3,378 ft.; shot and C.O.
Weiner et al No. 4 Smith, NW SE SE Sec. 4-25-37. S.D. repairs 3,455 ft.

Eddy County

G. R. Burke No. 1 State, NE NE NW Sec. 36-16-24. Drlg. 835 ft.
Carper Drlg. Co. No. 4 Robinson, SW SW SE Sec. 25-16-31. Loc.
Allen, Fair & Pope No. 4-A State, SE SW NW Sec. 36-17-29. Drlg. 575 ft.
Aston & Fair, Inc., No. 1 Hudson, C NE NE Sec. 18-17-31. T.D. 3,533 ft.; P.B. 3,518 ft.; S. 50 B.O.P.D.
Danciger O. & R. No. 5-A Turner, C N½ NW NW Sec. 19-17-31. M.I.M.
R. W. Fair No. 2 State, SE NW SW Sec. 36-17-29. C.&P.
Friendship Oil Co. No. 1 State, SE SE SW Sec. 36-17-29. Drlg. 2,705 ft.
Grayberg Oil Co. No. 12 Burch, NW NW SE Sec. 19-17-30. T.D. 3,220 ft.; F. 85 B.O.P.D.
J. E. Hughes No. 3 Brooks, NE NW NW Sec. 19-17-28. Drlg. 750 ft.
C. L. Jones No. 1 Harbold, NE NE NE Sec. 26-17-27. S.D. 488 ft.
F. G. Keyes No. 3 State, NE SW NE Sec. 9-17-28. S.O. 632 ft.; drlg. 717 ft.
Nash et al No. 9-A Jackson, C N½ NW NE Sec. 24-17-30. T.D. 3,510 ft.; acd. and F. 100 B.O.P.D.
R. L. Newberry No. 2 Saunders, NE SE SE Sec. 13-17-27. T.D. 490 ft.; rng. csg.
Plains Prod. No. 1 Daugherty (wildcat), SE SE SE Sec. 11-17-27. T.D. 428 ft.; W.O.C.
Premier Pet. Corp. No. 1-F Beeson, SW NW SW Sec. 31-17-30. T.D. 2,794 ft.; S.I. storage.
Premier Pet. Co. No. 2-F Beeson, SW SW SW Sec. 31-17-30. R.U. mch.
Red Lake Oil Co. No. 1 Reid, SE SW NE Sec. 20-17-28. Drlg. 100 ft.
Repollo Oil Co. No. 3 West, NE NE NE Sec. 3-17-31. T.D. 4,483 ft.; H.F.W.; S.D.O.
Repollo Oil Co. No. 6-A Parke, NW SW NW Sec. 22-17-30. Drlg. 1,115 ft.
Republic Prod. No. 3-B Robison, SE SE SE Sec. 35-17-29. Drlg. 70 ft.
W. K. Royalty No. 3-B State, C NE NW Sec. 16-17-31. T.D. 3,806 ft.; H.F.W.; to P.B.
H. T. Clark et al No. 1 Massie, C SW SW Sec. 27-18-29. S.D. 894 ft.
Barney Cockburn No. 1 State, C NE NE Sec. 16-18-31. R.U.R.
Continental et al No. 1 Brainard, NE NE NW Sec. 11-18-19. Drlg. 2,525 ft.
Continental et al No. 1 Travis, SE SE SE Sec. 3-18-29. Drlg. 750 ft.
J. H. Steinberger No. 2 Hastie, SW SW SW Sec. 18-17-28. T.D. 560 ft.; B. 6 B.O.P.D.
L. E. Elliott No. 1 Elliott, SE SE SE Sec. 24-18-29. Drlg. 2,445 ft.
Etz & Cone No. 1 Nelson, SE SE NE Sec. 10-18-30. Drlg. 3,178 ft.
Franklin Pet. Corp. No. 2-A Ballard, NW NW SE Sec. 1-18-29. Loc.
Franklin Pet. Corp. No. 1-B Ballard, NW NW NE Sec. 1-18-29. Loc.
R. W. Fair No. 1 State, NE NE SW Sec. 1-18-29. T.D. 2,763 ft.; shot and F. 25 B.O.P.H.
Farmer & Tallmadge No. 1 Hubbell, NE SW Sec. 4-18-25. U.R. 722 ft.
Franklin Pet. Corp. No. 1 Cappedge, NW SW NW Sec. 5-18-30. T.D. 2,890 ft.; H.F.W.; S.D.O.
Green Bay-Paton No. 1 Erwin, C SW SW Sec. 9-18-31. T.D. 3,186 ft.; F. 96 B.O. in 2 hrs.
H. W. Martin No. 1 Gates, SE SE SW Sec. 15-18-30. T.D. 3,244 ft.; drlg. plug.
Me-Tex et al No. 1-B Ballard, C NW NW Sec. 8-18-29. Drlg. 1,690 ft.
Me-Tex et al No. 1 Yates, C SW SE Sec. 5-18-29. W.O.C. 2,360 ft.
Plains Prod. No. 1 Swearingen, C NW NE Sec. 14-18-31. Drlg. 4,017 ft.
G. V. Price No. 2 Massie, SE SE NW Sec. 22-18-29. Drlg. 2,665 ft.
Martin Yates No. 1 Saunders, NE NE NE Sec. 12-18-29. T.D. 3,200 ft.; S. 13 B.O.P.D.
Rhodes Drlg. No. 2 Swearingen, C NE NE Sec. 14-18-31 (water well). Drlg. 2,871 ft.
Texwell Corp. No. 1 Sullivan, C SE SW Sec. 23-18-31. Drlg. 3,695 ft.
Fred Turner No. 1 Nickson, C NE NE Sec. 30-18-26. U.R. 10-in. 540 ft.
Underwood & Sanders No. 1 Miller, C SE NE Sec. 5-18-29. T.D. 2,620 ft.; 1,200 ft. O.I.H.; shot.
Underwood & Sanders No. 1 Guy, SE NW NW Sec. 10-18-29. Drlg. 2,275 ft.
Underwood & Sanders No. 1 Langford, C SW SW Sec. 9-18-29. T.D. 2,565 ft.; P.B. 2,495 ft.; S. 25 B.O.P.D.
Me-Tex Supply Co. No. 1 State, NW NW NW Sec. 2-19-31. Drlg. 3,474 ft.
Trojan Oil Co. No. 1 Grant, SW SW NE Sec. 33-20s-25e. Drlg. 897 ft.
Geo. L. Roundey No. 1 Roundey, C SE SW Sec. 8-23-26. Drlg. 1,215 ft.

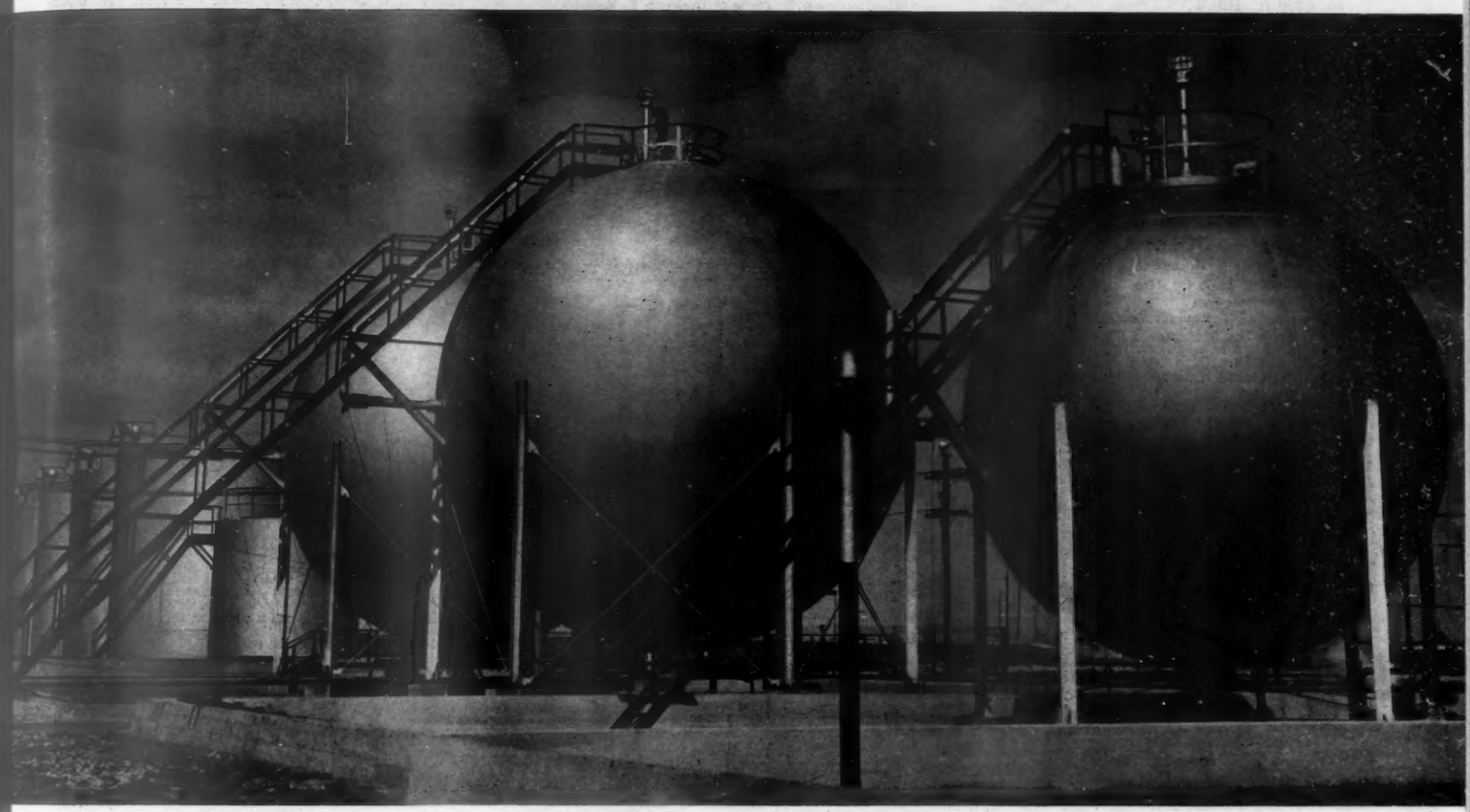
Chaves County

Mac T. Anderson No. 1 Warnock, C SW SE Sec. 17-15-27. Drlg. 1,815 ft.
R. M. Baker No. 1 Baker, NW NW NW Sec. 19-10-30. Rig. comp.; M.I. tools.
Comanche Drlg. No. 1 Campbell, NE NE NW Sec. 15-11-26. T.D. 1,343 ft.; P.B. 1,271 ft.; acdz.; S.D.O.
Nay Hightower No. 1 Billingslea, C SW NE Sec. 28-11-30. T.D. 3,445 ft.; P.B. 3,430 ft.; B. est. 50 B.O.P.D.
New, Russell & Wood No. 1 Sterrett (wildcat), NW SE NW Sec. 29-11-25. Drlg. 991 ft.
Tarkenton Bros. No. 1 Peters, SE SE NW Sec. 33-11-25. S.D. 910 ft.
Western Minerals, Inc., No. 1 Dow (wildcat), C SW NW Sec. 27-10-30. Drlg. 2,400 ft.

Lunc County

O. D. Berry No. 1 Berry, SE SE SW Sec. 33-22s-10w. Drlg. 770 ft.

GULF OIL CORPORATION uses S & J Fittings for Spheres

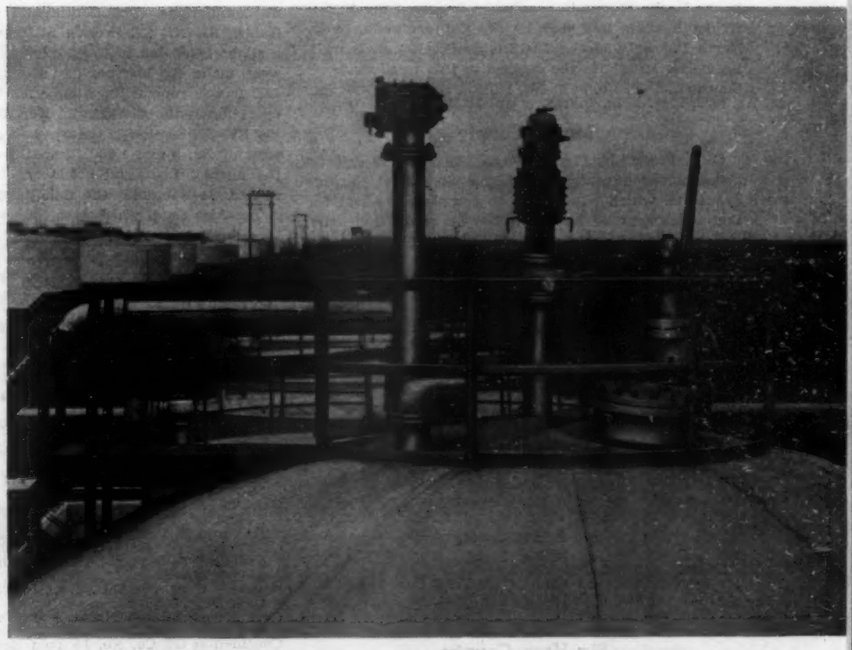


Shown above are three Hortonspheres at the Port Arthur refinery of the Gulf Oil Corporation. The two spheres at the left are 35′ 3″ in diameter and have a capacity of 4000 barrels each. They are used for the storage of butane at 100 pounds pressure.

The sphere at the right measures 22′ 3″ in diameter, has a capacity of 1000 barrels, and is used as a recharging vessel for the storage of propane at 250 pounds pressure.

These three Hortonspheres are equipped with S. & J. Automatic Tank Gauges; Instrument Locks for sampling and taking temperature readings; and Vacuum Breather Valves.

These three items are but a part of a complete line of S. & J. fittings, designed specifically to meet the problems of petroleum storage in spherical and spheroidal tanks. We solicit your inquiries.



Close up view of the S. & J. Automatic Tank Gauge, Instrument Lock, and Vacuum Breather Valve.

SHAND & JURS CO.
BERKELEY, CALIFORNIA

295 Madison Avenue, New York
225 W. 11th Street, Los Angeles
601 Fannin Street, Houston
565 West Washington Boulevard, Chicago

SHAND & JURS

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 Pajarita, Sec. 22-9n-1e. Drlg. below 1,450 ft.

San Juan County

Continental Oil Co. No. 93 Rattlesnake, C SW NW Sec. 1-29n-19w. Drlg. 250 ft.
Angel Peak Oil Co. No. 8 Govt., C NE SW Sec. 13-28n-11w. Drlg. 175 ft.
Al Greer No. 2 Thompson, SW SE SW Sec. 10-30n-11w. S.D. 1,125 ft. for 6⅝-in. for W.S.O.
Geo. Goodwin No. 1, NE NW NW Sec. 16-30n-11w. Drlg. sh. 1,350 ft.; H.F.W.

San Miguel County

Ben E. Keith No. 1 McCune, SW SE SW Sec. 32-16n-12e. S.D. 400 ft.; repairs.
Southwest Drlg. Co. No. 1 Conchas, NW NE Sec. 34-17n-21e. T.D. 2,100 ft.; fsg.

Torrance County

Drice Co. No. 1 Garland, NE SE Sec. 32-7n-7e. Drlg. 1,990 ft.; 5⅛-in. at 1,965 ft.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE Sec. 19-5n-3e. Cmtd. 8¼-in. at 2,295 ft.; W.O.C.
Joiner Oil Corp. No. 1 San Clement, C NE SE Sec. 23-7n-7e. T.D. 5,606 ft.; set whpstk.; drlg. by D.P.

COLORADO

Adams County

Derby Dome O. & G. Co. No. 2 Baxter, C SE SW Sec. 2-3s-66w. Bldg. rig.

Boulder County

J. A. Warren No. 3 Maxwell, NW NE NW Sec. 24-1n-17w. Drlg. 235 ft.
Reynolds & Rohr No. 1 Thomas, SW SW Sec. 17-1n-70w. S.D.O. 2,138 ft.; will D.D. under management of Reynolds.

Fremont County

T. E. Maloney No. 1, SE NW Sec. 34-19s-69w. T.D. 810 ft.; str. cr. hole.
Waterville Oil Co. No. 2 Persons, CWL NE NE Sec. 17-19s-69w. T.D. 125 ft.; fsg.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE Sec. 36-7s-88w. Drlg. 2,400 ft. in dol.; L. and blk. sh.

Huerfano County

J. W. Tomkins & Sons No. 2 Ojo, SE SE SE Sec. 3-29s-69w. T.D. 805 ft.; rng. 8¼-in.
S. W. Pressey No. 3 Ojo, NW NW Sec. 11-29s-69w. Drlg. 180 ft. (C.D.).
S. W. Pressey No. 2 Alamo, C SW SE Sec. 3-27s-68w. S.D. 1,910 ft.
Miller & Hall No. 1 Hamilton, SE NW Sec. 20-29s-67w. T.D. 670 ft.; rng. cave string.
Baker-Dunigan No. 1 Firm Bros., SE NE Sec. 3-29s-69w. Spd. to 150 ft. and S.D. for heavier rig.

La Plata County

Nick Splatter No. 1-X Bryce, C SW SW Sec. 32-33n-9w. T.D. 2,352 ft.; fsg.

Mesa County

The Continental Oil Co. No. 1 Miller, joint with the California Co. and the Amerada Petroleum Corp., on Divide Creek, moved up to first place for depth record in the Rocky Mountain area when it passed the 10,281-ft. depth made last year by the California Co. in its North Dakota wildcas. The Divide Creek well is drilling below 10,361 ft., the deepest in this territory.

Continental Oil Co. et al No. 1 Miller, SW SW NW Sec. 36-8s-91w. Drlg. blk. limy sh. 10,361 ft.

Moffat County

C. R. Privett No. 1 Sutton, on Dry Lake, is drilling ahead under a contract with the Steamboat Springs Syndicate, which has agreed to complete the test for the assignment of leases on 500 acres on the structure. The syndicate does not have any interest in the well. It topped the Morrison formation at 1,229 ft. and is drilling ahead in that horizon with the Sundance as the objective.

Cooperative O. & G. Co. No. 1 Gossard, CWL E½ E½ Sec. 29-5n-93w. Spd. and S.D. to complete R.U.
C. R. Privett No. 1 Sutton, NE NE SW Sec. 1-5n-96w. Drlg. 1,310 ft.
J. S. Warner No. 1 Baker, NE NE SW Sec. 35-5n-96w. Drlg. 200 ft. in Brown's Park form.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE Sec. 34-11s-75w. T.D. 6,975 ft.; C.O. to top of blr.

Pueblo County

Eden O. & G. Co. No. 1 Horse Creek Ld. & Cattle, SW SE Sec. 29-19s-64w. Drlg. fine sd. 2,185 ft.; (C.D.).

Rio Blanco County

Texas Co.-California Co. No. 2 Unit, NW SE SW Sec. 27-3n-94w. Drlg. 3,824 ft.
Buford Oil Co. No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 3,645 ft.; W.O. 6¼-in.

WYOMING

Big Horn County

The Ohio Oil Co. No. 1 Syverson, which is drilling to the Madison on the Garland dome, is reported to have had a flow of 7,000,000 cu. ft. of sweet gas in the Dakota at 1,913-2,050 ft., estimated on drill-stem test. This was cased off with the 10¾-in. at 2,068 ft. After the well is completed in the Madison, rig will be skidded and another hole drilled to the gas sand. The gas evidently has been trapped at this location by a fault as the supply in the Dakota generally has been considered exhausted. Location is not far from a well drilled a number of years ago by Sid Keoughan which made 100,000,000 cu. ft. a day in the Dakota and was out of control for a long time.

Ohio Oil Co. No. 1 Syverson, Sec. 34-54n-93w (SE SW NW Lot 53). Drlg. 2,540 ft.
Frank S. Scott No. 1 Robertson, SE SE SE Sec. 6-54n-93w. Drlg. 417 ft.
Mule Creek Oil Co. No. 1 Sessions, Lot 53 (NW NW) Sec. 34-56n-97w. Cg. 4,010 ft.
Libby-Keoughan No. 1 Sheets, SE NE SE Sec. 9-55n-96w. T.D. 3,840 ft.; fsg.
A. L. Rankin No. 1 Karjala-Rankin, C SW NW Sec. 10-54n-94w. T.D. 790 ft.; M.I. 6⅝-in. to set on bttm. for W.S.O.; T. Embar 180 ft.; Tensleep 481 ft.; Amsden 755 ft.

Carbon County

Sinclair-Wyoming Oil Co. No. 13 Wertz, NE NW NW Sec. 7-26n-89w. Drlg. 5,036 ft.
Producers Oil Co. No. 1 Lake Valley, CNL Sec. 14-20n-88w. Drlg. gr. sh. 2,550 ft.; carrying 10-in. at 2,485 ft.

Converse County

New Era Fuel Co. No. 1 Simonson, NW NE SE Sec. 16-32n-68w. Drlg. 715 ft.
Wyshawn Oil Co. No. 2 Lindley, C SW SW Sec. 35-32n-69w. Drlg. below 2,693 ft.
W. W. Austin et al No. 1 Pfister, SW NE NW Sec. 20-32n-68w. T.D. 713 ft.; cmtd. 5⅛-in. at 710 ft.; S.G. in sdy. sh. 710-13 ft.
New Era Fuel Co. No. 2 Gasper, CNL NW SW Sec. 25-32n-69w. Cg. 750 ft.
New Era Fuel Co. No. 1 Pestal, SE NE NE Sec. 32-32n-69w. C.O. 420 ft. to run 8¼-in.; (formerly Fred Bunker).

Fremont County

Sinclair-Wyoming Oil Co. No. 11, CSL NE NE Sec. 15-32n-95w. B.R.
Hall & Olinger No. 5 Govt., NW NE Sec. 33-38n-93w. S.D. 254 ft.
Lincoln O. & G. Co. No. 5 Tribal, C SW SE Sec. 23-1s-1e. Drlg. 919 ft.
Pilot Oil Co. No. 8 Hoffman, C SW SW Sec. 22-3n-1w. Drlg. gr. sh. 650 ft.
Consolidated Oil Properties No. 3 Ewart, C SW SE Sec. 16-1n-1w. T.D. 1,245 ft.; U.R. 6⅝-in. at 1,000 ft.
Frank Pouppirt No. 2 Fidelity Tr., NW NW SW Sec. 27-3n-1w. T.D. 1,200 ft.; C.O. to res.

Hot Springs County

Phebus Oil Co. No. 2 Govt., NW SW SW Sec. 11-44n-98w. T.D. 1,100 ft.; swdg. out kink in 12½-in. joint.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW Sec. 23-21n-117w. T.D. 1,916 ft.; rng. 8⅝-in. to bttm.

Natrona County

Connelly Drlg. Co. No. 1 State, SW SW NW Sec. 36-36n-81w. T.D. 1,268 ft.; M.I. 10-in.
General Pet. Corp. No. 1 Govt., C NW SE Sec. 21-35n-77w. T.D. 8,511 ft.; P.B. to 7,974 ft.; fsg. tbg.
Summit Oil Co. No. 2 Govt., NW NE NE Sec. 21-33n-80w. Drlg. 430 ft.; 8¼-in. at 426 ft.; S.G. in upper Frontier at 428 ft.

Niobrara County

Lance Creek had one new operation. There were no completions. The Continental Oil Co. No. 9 Otto Rohiff, SE NE SE Section 31-36n-65w, which marked a slight extension of the Sundance sand on the northwest, made 430 bbl. per day after acidizing with 2,000 gal. It was reported a completion last week. The new operation is the Continental No. 10 Otto Rohiff in the SW SW SE Section 31, nearly half a mile to the southwest of No. 9 and 1,000 ft. southwest of No. 8 Rohiff, the nearest Leo sand producer. It will call for two offsets. It is outside the unit participating area.

The Joss sand, which was found just below the Leo sand in the Minnelusa Oil Corp. No. 2 Joss, a recent completion, contained water in the Continental No. 3-B Diehlman and the Ohio Oil Co. No. 11 Putnam. Both will be completed in the Leo sand.

Holly Dev. Co.-A. B. Cobb No. 4 Novick, SE SE SW Sec. 6-35n-65w. Drlg. 2,106 ft.
Ohio Oil Co. No. 3 Cash-1, SW NW SW Sec. 4-35n-65w. Drlg.; W.O. equip.
Minnelusa Oil Corp. No. 1 Marline, NW SW SW Sec. 4-35n-65w. T.D. 5,493 ft.; top Leo sd. 5,486 ft.; cmtd. 7-in. at 5,482 ft.; W.O.C.
Ohio Oil Co. No. 12 Elizabeth Lamb-Acct. 2, NE SE SE Sec. 5-35n-65w. Rig; W.O. equip.
Continental Oil Co. No. 4 Apex O.P.C.-3, NW NE SW Sec. 34-36n-65w. S.D. 3,695 ft. for repairs.
Continental Oil Co. No. 6 Rodeo-4, NW NW NE Sec. 35-36n-65w. Drlg. sh. 3,685 ft.
Continental Oil Co. No. 3-B Diehlman, SW SE NW Sec. 8-35n-65w. T.D. 5,698 ft.; P.B. to 5,565 ft.; swbd. 100 B.O. and 50 B.W. per day from Leo.
Continental Oil Co. No. 16 Tom Bell Cattle, NW SW SW Sec. 34-36n-65w. Cmtd. 13-in. 313 ft. with 240 sacks; W.O.C.
Argo Oil Corp. No. 1 U. S.-40, NW NW SW Sec. 8-35n-65w. Drlg. 3,555 ft.
Continental Oil Co. No. 4 Apex O.P.C.-4, SE SE NW Sec. 35-36n-65w. T.D. 4,220 ft.; prep. to core.
Continental Oil Co. No. 15 Tom Bell Cattle, C SW SW Sec. 34-36n-65w. Cg. dol. 5,580 ft.; red marker 5,285 ft.
Ohio Oil Co. No. 11 Putnam, SE SE SW Sec. 33-36n-65w. T.D. 5,529 ft.; W. in Joss sd.; P.B. to 5,392 ft.; prep. to acid.
F. F. Hintze et al No. 1 Wright-Govt., C NW SE Sec. 30-36n-63w. T.D. 4,964 ft.; cmtd. 7-in. at 4,617 ft. and S.D.
Fall River Roy. & Prod. Co. No. 1 Govt., CSL SE SE Sec. 35-40n-61w. Drlg. 1,750 ft.; 10-in. cmtd. 1,730 ft. for W.S.O.
Continental Oil Co. No. 10 Otto Rohiff, SW SW SE Sec. 31-36n-65w. Rng. dk. (first report).

Park County

Dry Creek Oil Co. No. 1 State, C NE NW Sec. 16-50n-100w. T.D. 1,280 ft.; T. Frontier 1,270 ft.; cmtd. 8¼-in.; W.O.C.

Sublette County

J. C. Anderson Drlg. Co. No. 1, W½ NE Sec. 30-30n-111w. Bldg. rig; C.T. test to 2,000 ft.
California Co. No. 1 Unit 1, C SW NE Sec. 14-31n-109w. T.D. 6,683 ft.; rmg. to run 9⅝-in.
Wyo. Pet. Corp. No. 1 Budd, C NE NE Sec. 10-29n-113w. Drlg. below 1,792 ft.
Texas Co.-Frontier Pet. Co. No. 1 Govt. Unit, SE SE SW Sec. 1-28n-114w. T.D. 8,194 ft.; P.B. and tstg.
Yellowstone Oil Co. No. 1 Budd, C SE SE Sec. 6-30n-112w. Drlg. 450 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Clark, NW SE SW Sec. 12-19n-194w. Drlg. 2,485 ft.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW Sec. 18-19n-103w. T.D. 4,546 ft.; cmtd. 6-in. lnr. 3,494-4,118 ft.; perf. at 4,000-05 ft.; tstg.
Sinclair-Wyoming Oil Co. No. 84-A, SW NW NW Sec. 11-26n-90w. Drlg. 970 ft.; top Frontier 610 ft.

Uinta County

Spring Valley Pet. Co. No. 13, CSL SE SE Sec. 22-15n-117w. R.U. to D.D. from 1,726 ft.; O.W.D.D.

Weston County

The Osage Trust Co., one of the leading operators in the Osage field, has taken over the T. R. Ragland, trustee, well in the C NW SW Section 31-42n-60w, in the Dewey pool and will deepen it with cable tools. It reached the top of the Leo sand at 2,465 ft. last February, where it had a show of oil in the top, and was drilled to 2,535 ft. Since then it has been shut down.

In the Osage field the Federal Oil Co. is drilling into the sand in its No. 9 in Section 15 and showing for a commercial well. Butcher Brothers No. 1, NW SW NE Section 16-46n-63w, is a near completion at 217 ft. This is a first report.

Dornacher & Neiman No. 1 Neiman, NW NW NW Sec. 6-47n-64w. Drlg. 300 ft.
Lem Johnston No. 1, NW SW Sec. 24-44n-63w. Drlg. 3,305 ft.
John Brorphy No. 1 George, SW SE NW Sec. 12-48n-64w. Drlg. below 2,430 ft.
F. P. Dilger et al No. 4 Ost, CNL NE NE Sec. 25-46n-64w. Cg. in Sundance below 2,300 ft.
Hunter & Satterlee No. 1 Draper, NW NW NW Sec. 10-46n-63w. S.D. 160 ft. (C.D.) for repairs.
Kroker et al No. 2, CNL NE NW Sec. 31-47n-63w. T.D. 375 ft.; W.O. new mach. to D.D.
Updike Co. No. 7, NW NW SW Sec. 25-46n-64w. Cmtd. 8¼-in. at 700 ft.; W.O.C.
Federal Oil Co. No. 9, CNL SE SE Sec. 15-46n-64w. Drlg. in sat. sd. topped at 2,130 ft.

MONTANA

Blaine County

Walter Drought et al No. 1 Stam, CSL SW SE Sec. 10-31n-18e. T.D. 1,065 ft.; S.G.; rng. csg. to top Eagle sd.

Carbon County

R. R. Tarrant No. 2 McKay, C SE NW Sec. 4-6s-18e. Drlg. 1,900 ft.
Alex Beaton No. 1, CSL SE SE Sec. 23-6n-23e. Drlg. 1,600 ft. in 8¼-in. hole.
Miracle Oil Co. No. 2 Govt., CWL NE SE Sec. 3-6s-23e. T.D. 2,381 ft.; fsg.; tools at 1,600 ft.

Fallon County

Montana-Dakota Utilities Co. No. 137 Govt. Unit 7, NE SW SW Sec. 10-6n-60e. Drlg. 670 ft. in Bearpaw; 10¾-in. at 104 ft.

Glacier County

Cut Bank had one completion and three new operations. The Glacier Production Co. No. 2 Hawkins, NE NE SW Section 17-33n-5w, swabbed 94 bbl. first 24 hours at 2,975 ft., total depth, from the Cut Bank sand at 2,900-53 ft. Main pay was at 2,948-53 ft. The Sunburst at 2,865-80 ft. had a show of oil at 2,875 ft. The 7-inch is at 2,928 ft.

Cobb-Reagen No. 4 Jackson, SW SW NE Sec. 5-32n-5w. B.R. (first report).
Glacier Prod. Co. No. 1 Hendrickson, C NW NE Sec. 28-33n-5w. R.U. (first report).
Kistner-Watson No. 2 Britton, SW SE SE Sec. 14-34n-5w. Loc. (first report).
Huber-Montana Co. No. 1 Krueger, CWL SW SE Sec. 11-37n-5w. Cmtd. 10¾-in. at 220 ft.
Texas Co. No. 4 Curran, C NE NE Sec. 8-32n-5w. Drlg. 732 ft.; Colo. 625 ft.; 10¾-in. at 667 ft.
Texas Co. No. 4 State, C NW NW Sec. 16-32n-5w. Drlg. 424 ft.
Santa Rita O. & G. Co. No. 2 Stahl, C NW SW Sec. 21-35n-5w. Drlg. 1,450 ft.; Colo. 610 ft.; 10¾-in. 622 ft.
Par Oil Co. No. 2 Tribal-170, SW NE SW Sec. 7-32n-5w. B.R.
Glacier Prod. Co. No. 1 Jaeger, C NW NW Sec. 15-32n-5w. Colo. 595 ft.; rng. 10¾-in. to 633 ft.
R. C. Tarrant No. 8 Getty, CWL NW SE Sec. 15-34n-6w. Drlg. 1,885 ft.
Santa Rita O. & G. Co. No. 2 Jordan, CNL NW SE Sec. 7-32n-5w. Cmtd. 7-in. at 2,879 ft.; W.O.C.
R. C. Tarrant No. 3 Yunck, SW SW NW Sec. 12-34n-6w. Spdg.
Olive Oil Co. No. 5 Winkler, NE NE NE Sec. 35-35n-6w. Drlg. 2,690 ft.; top Sunburst 2,685 ft.
Glacier Prod. Co. No. 1 Larson, CEL NE NW Sec. 35-36n-6w. Drlg. 3,046 ft. in hard sd.; 1,700 ft. O.I.H.
A. R. Pardue No. 2 Tribal-170, NW SW SW Sec. 7-32n-5w. Drlg. 2,893 ft.; 2,000 ft. O.I.H.
A. B. Cobb No. 1 Vargo, C SE NE Sec. 19-37n-4w. T.D. 2,660 ft.; cmt. failed to hold; recmtg. 7-in. on bttm.

Meagher County

Dan Drumheller No. 1 Moss Agate, SW SE NE Sec. 25-7n-7e. Drlg. 940 ft.

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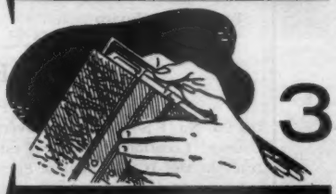

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Teton County

The Zodiac Oil Co. and Gulf Oil Co. No. 1 Kellogg, NE NW NE Section 33-28n-5w, Pendroy district, was plugged back and shot in the Cut Bank sand at 2,835-41 ft. without results and was plugged and abandoned. It tested the Madison lime at 2,846 ft., total depth, where it had a little oil and water.

R. C. Tarrant No. 1 Hoeschen, NE SE Sec. 34-27n-5w. R.O.G.

Toole County

The limits of the Bow and Arrow gas field on the northeast apparently were defined in the Montana Gas Co. No. 1 Campbell, C NW NE Section 19-37n-1e, which had water in the Sunburst sand at 1,782-93 ft. and was abandoned at last named depth. Location is 1¼ miles to the northeast of No. 1 Kyle, the discovery well, which was completed in 1937 for 19,000,000 cu. ft. Another well in C SE SW Section 24 was completed for 18,000,000 cu. ft.

Kevin-Sunburst had two completions and three new operations.

O. A. Nepsted No. 3 Haugen, NW NE NW Section 11-35n-3w, is pumping 15 to 19 bbl. per day from the Sunburst at 1,560-1,600 ft. Total depth is 1,601 ft.

Coolidge & Coolidge No. 5-A State, SW SW NW Section 36-36n-2w, is pumping 40 bbl. per day at 1,563 ft., total depth, from the Sunburst at 1,517-63 ft. Top of sand was at 1,503 ft. It made several flows while drilling in.

Texas Co. No. 8 Swears, CEL SE Sec. 9-35n-2w. R.U. (first report).

Big West Oil Co. No. 10 Dahlquist, CNL SW SE Sec. 21-35n-3w. Drlg. 500 ft. (first report).

Art Crabtree No. 1 Thompson, NE SE NW Sec. 35-35n-2w. Drlg. 750 ft. (first report).

R. G. Parrant No. 1 Holbrook, C NW NE Sec. 2-36n-3w. S.D. 160 ft.

Ramona Oil Co. No. 3 Govt., CWL NE NW Sec. 12-35n-3w. S.D. 1,563 ft.; Sunburst 1,545-63 ft.; 60 ft. O.I.H.

Huso Bros. No. 1 Elingson, C NE SW Sec. 14-35n-3w. T.D. 1,005 ft.; rng. 8¼-in.

Fulton Pet. Co. No. 3 Thompson, SE NE NW Sec. 28-35n-3w. Drlg. 1,250 ft.

Pfabe & Engleking No. 3 Hurley, near C NW NE Sec. 8-34n-2w. T.D. 1,463 ft.; contact 1,455 ft.; W.; S.O. 1,455 ft.; P.B.

Superior Pet. Co. No. 8-A Govt., CEL NW NE Sec. 12-35n-3w. Drlg. 1,720 ft.

G. & A. Oil Co. No. 2 Krause, SE SE SE Sec. 9-35n-3w. T.D. 1,805 ft.; P.B. to break in L. at 1,789 ft.; 2 B.O. P.D.; acd. 500 gal.

Superior Pet. Co. No. 8 Govt., CEL NW NW Sec. 12-35n-3w. T.D. 1,865 ft.; contact 1,860 ft.; light S.O.

Fulton-Commonwealth No. 2 Thompson, SE NE SE Sec. 28-35n-3w. S.I. at 1,728 ft.

W. M. Cassidy No. 1 Phoenix, CNL NW NW Sec. 28-35n-4w. S.D. after D.D. into sat. Mad. L. at 2,325-58 ft.

Yellowstone County

R. C. Tarrant No. 2 Kelly, CEL NW SW Section 26-3s-24e, Mosser area, was plugged and abandoned at 975 ft., total depth.

Nelson Story-Hogan, Ltd., No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; R.U. to res.; (formerly Signal O. & G. Co.).

Riverton Oil Co. No. 1 Fox, CEL NW NE Sec. 14-2n-23e. Res.; T.D. 1,975 ft.; U.R. 8¼-in. from 1,900 ft. to bttm.

UTAH

Box Elder County

Northern Oil Co. No. 1, C NE SW Sec. 17-13n-4w. M.I.M.

Grand County

Cane Creek Oil Co. No. 1 Govt., NW SW Sec. 31-26n-21e. T.D. 3,180 ft.; 6⅝-in. cmtd. 3,135 ft.; failed to hold; recmtg.

Summit County

Longwell Pet. Co. No. 1, SE SW SE Sec. 35-3n-5e. Res. at 2,876 ft.; drlg. 2,965 ft.

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Rocky Mountain Runs

Production estimates for week ended July 1:

WYOMING

	Barrels
Salt Creek	14,750
Big Muddy	1,190
Badger basin	130
Bryon	2,070
Cody dome	80
Cole Creek	10
Dallas Derby	250
Dewey dome	10
Dutton Creek	60
Elk basin	540
Frannie	1,260
Garland	2,490
Grass Creek	2,330
Hamilton dome	2,190
Hidden dome	70
Hudson	250
Iron Creek	20
LaBarge	940
Lance Creek	16,280
Lost Soldier	1,730
Mahoney	300
Medicine Bow	1,760
Mule Creek	200
Midway	30
Oregon basin	2,330
Osage	800
Quealy dome	650
Rock River	2,940
Poison Spider	80
Teapot	20
Wertz	1,570
Total Wyoming	57,330

MONTANA

Border	110
Cat Creek	560
Cut Bank	8,790
Dry Creek	1,150
Kevin-Sunburst	4,390
Pondera	920
Total Montana	15,920

COLORADO

Florence	200
Fort Collins and Wellington	320
Wilson Creek	320
Iles dome	2,060
Moffat	280
Orchard	10
Rangely	30
Tow Creek	140
Price	690
Total Colorado	4,050

NEW MEXICO

Cooper	4,520
Eaves	940
West Eunice	110
Eunice	23,970
Hardy	3,730
Hobbs	12,920
Jal	730
Langlie	5,760
Lynch	540
Lynn	840
Mattix	4,700
Monument	25,180
North Lynch	40
Penrose	5,770
Rhoades	130
Skaggs	90
Skelly	1,960
South Eunice	4,040
South Lovington	530
Vacuum	10,450
Artesia-Maljamar	8,920
Getty	100
Hogback	200
Rattlesnake	550
Table Mesa	60
Total New Mexico	116,780
Total Rocky Mountain region	194,080

East Texas Fields

(Continued from Page 76)

Oil Co. No. 1 Swift, the discovery extension into Leon County. Location is in the western part of a 53-acre tract in the H. W. Sublett Survey.

In the Houston County portion of the field, Humble Oil & Refining Co. has been successful in eliminating

gas and has completed its No. 3 Burns Heirs as a low-ratio oil well. The well flowed 106 bbl. of fluid in 24 hours, of which 104 bbl. were 36.8-gravity oil and the remainder 2.6 per cent was basic sediment and water. Total depth is 5,852 ft. The well is on a 132-acre tract in the Thompson Survey.

Limestone County

Plans for redrilling the entire old Wortham Woodbine sand pool of Limestone County, along the Balcones fault system, was disclosed by a group of operators undertaking the project. McNeil Petroleum Co. of Lockhart, which includes J. C. McNeil, E. L. Chapman of Fort Worth, and J. E. Mills of Austin were drilling No. 1 W. E. Smith, in the Sarah McAnulty Survey, on the west flank of the pool. The company recently acquired leases on the entire pool and plans to drill a total of 20 wells. The project will hold particular interest because of the high recovery of the pool, approximating 1,000 bbl. per acre-foot of sand.

New Wildcats

Northwest Collins County has been given a new 4,000-ft. Strawn sand wildcat by Sam L. Thomas, Dallas. It is about 2½ miles northeast of Celina and on the Tom Newsome lands, B.B.B.&C. Survey. Contract has been let to Fred Lausen, Tulsa, who is to start moving in equipment this week. The test is on a block of 10,000 acres assembled several years ago by McElreath & Suggett of Fort Worth.

Compton Oil Co., Fort Worth, has started moving in standard rig for a projected 5,000-ft. wildcat test in southern Ellis County. The test is No. 1 M. L. Vanlandingham, staked on a 160-acre tract in the O. Wheeler Survey, 6 miles west of Italy. It is on a 10,000-acre block turned to the company for drilling.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Tide Water-Seaboard No. 1 Ollie Clay, 3,974-4,048 ft., 85,000,000 cu. ft.

Franklin County

Humble Oil & Refining Co. No. 7 Penn fee, 4,241-48 ft., 389 bbl.

Freestone County

J. R. Bunn No. 1 Robinson, dry and abandoned at 2,948 ft.

Houston County

Humble Oil & Refining Co. No. 3 Jim Burns, 5,844-52 ft., 104 bbl.

Leon County

Humble Oil & Refining Co. No. 1 Campbell, abandoned location.

Kentucky Fields

(Continued from Page 53)

northeast of Rockport, Ind.: Hart & Hart No. 1 W. M. Nantz, deepening from 791 ft. to McClosky sand; now drilling at 825 ft. Philpot district: Fin-Wil Drilling Co. No. 1 J. H. Sloane, drilling at 1,410 ft. Pleasant Ridge district: F. F. Gibson and others No. 4 Mrs. Tassie Church Townsley, drilling at 75 ft.

Hancock County, Cloverport district: Turner and others No. 5 R. Duke, drilled to 702 ft., plugged back to 540 ft.; producing 4 bbl. from Bethel sand. Cumberland Petroleum Co. and others No. 5 W. M. Snyder, dry hole at 675 ft. Indian Hill district: Ryan, Labree & Brown No. 1 J. L. Daniels, rigging up. Patesville district: Lincoln Petroleum Co. (from Roy Beard and others) No. 3 O. S. McGavock, dry hole, total depth 520 ft. Lions district: O. D. Vickers No. 2 Cicero Smith, drilling at 350 ft. Maceo district: Jack Cox No. 1 R. L. Waltman, rigging up.

Henderson County, Reed district: Spring Rose Drilling Co. No. 2 Ray Pillman, dry and abandoned at 1,889 ft.

Hopkins County, Madisonville district: Minton, Lacey & Tonberlin No. 1 Bailey Whitzell, dry and abandoned at 2,993 ft.

McLean County, Semiway district: L. C. Young and Sunflower Oil & Gas Co. No. 3 C. S. Vickers, dry hole at 1,452 ft.

Muhlenberg County, Penrod district: Joe Blaylock No. 1 C. DeArmon, dry and abandoned at 400 ft. Mortons Gap district: Jess Ashby No. 1 John Paige, location.

Ohio County, Oaks district: Mecca Oil Co. No. 3 Seton, dry and abandoned at 1,413 ft. Taffy district: Ohio Oil Co. No. 25 J. M. Kirk, dry and abandoned at 425 ft. Beda district: Mike Callas No. 2 C. W. Westerfield, dry and abandoned at 938 ft.

Todd County, New Harmony district: Smith & Hicks No. 1 Regen, rigging up.

Union County, Hitesville district: Sun Oil Co. No. 1 Robert Nally, dry and abandoned at 2,705 ft. Morganfield district: Sun Oil Co. No. 1 Waller Young, drilling at 1,100 ft.

EASTERN KENTUCKY

ASHLAND, Ky., July 3.—Five oil well completions are included in the week's report of activities in eastern Kentucky, all of them in Powell County.

In Powell County, Evans Oil & Gas Co. completed No. 2 Melvin Townsend on South Fork at a total depth of 950 ft. It produced 8 bbl. of oil per day. Hooks Bess No. 1 on the Jim Bellomy land on South Fork was completed at 900 ft., with a production of 10 bbl. of oil daily. Lyle & Kinser completed No. 1 Kinser Heirs, on South Fork at a total depth of 900 ft. It was good for 5 bbl. of oil daily.

Leslie Jones No. 1, on the L. S. Townsend land, on South Fork, started at 5 bbl. of oil daily at a total depth of 950 ft. Joe T. Brach completed No. 6 Lowery Heirs on Miller's Creek with a production of 3 bbl. per day.

Boyd Knox and Brown had reached the 300-ft. level in No. 4, on the I. T. Rogers land, on South Fork. J. P. Perry is down 500 ft. in No. 2 Melvin Townsend on South Fork. Monroe Faulkner is drilling at 400 ft. in No. 1 Joe Mullins on South Fork.

In Magoffin County, Rough River Corp. was fishing at 650 ft. in No. 4 H. B. Adams, Sr., on Rock Lick. One string of tools was removed from the hole but another string remains with good chances of removal.

In Knott County, Inland Gas Corp. was drilling at 90 ft., in slate, in No. 209 on the Joseph Pigman land on Troublesome Creek and had reached 1,720 ft., in Maxson sand, in No. 210 on the H. H. Pigman land on the Right Fork of Troublesome Creek.

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Extension Activity Grows in Yoakum and Hockley Areas

By
D. H. STORMONT

FORT WORTH, Tex., July 3.—Extension activity in two north Permian basin fields, the Wasson-Denver-Bennett pool of Yoakum County and the Slaughter pool of Hockley County, led the developments in the West Texas district during the week.

These two fields, the Wasson-Denver-Bennett and the Slaughter, are credited from week to week with 1-mile and 2-mile extensions until the true extent of their productivity is somewhat beyond ready comprehension. As of the close of the first 6 months of 1939, the Wasson-Denver-Bennett area is considered one field, comprising some 53,000 acres. The Slaughter field, including its recent extensions and as of the close of the first half of 1939, includes some 17,112 acres of proven territory.

By way of comparison with some of the more well-known fields of the basin, it is seen that the combined Yoakum County field contains almost 28,000 acres more than the Goldsmith field of Ector County, 27,000 acres more than the Henderson pool of Winkler County, and 43,000 acres more than the Foster pool of Ector County. Further comparison shows the Slaughter pool's approximately 17,000 acres is only about 8,000 acres less than the Goldsmith field and is about 10,000 acres more than the Keystone field of Winkler County. Neither of these two fields under discussion, however, will produce as much oil per acre-foot as the fields used in comparison, because the recovery figure per acre for the Wasson-Denver-Bennett field is 8,500 bbl. and for the Goldsmith 11,250 bbl. and the Foster 8,600 bbl. The recovery figure per acre for the Slaughter field is estimated at 5,000 bbl.

In the "between area" of the Wasson-Denver-Bennett field several link tests held the spotlight for another week. One and one-half miles east of the main body of the Wasson field, Aloco Oil Co. No. 1 Mary Jordan was receiving third-stage acid treatment with 5,000 gal. at a total depth of 5,150 ft. The well, in the SW SE Section 764, has been estimated for 400 bbl. of oil daily. About a mile southeast of No. 1 Jordan, Milhoan Drilling Co. No. 1 Willard, SE SE Section 803, was preparing to test at a total depth of 5,142 ft. The company has staked location for No. 2 Willard, in the NE SE Section 803, about two locations north of its No. 1 Willard. East offset to Texas Pacific Coal & Oil Co. No. 1 Brownfield, one of the first wells in the link area, Oil Development of Texas No. 1-A Willard, NW¼ Section 803, is nearing the productive horizon in drilling below 5,068 ft.

On the extreme western side of the field, in the area called the Roberts extension, Osage Drilling Co. is seeking a ¾-mile southeast extension at its No. 1 Shell-Hudson. The test is about a mile and a half west of the main body of the field and is in Section 834. It has been shot with 360 qt. from 4,975 ft. to 5,095 ft. and was last reported swabbing an estimated 5 bbl. of oil hourly. Shell Oil Co., Inc., No. 7 Roberts, Section 793, on the western edge of the Roberts area, is seeking a two-location west extension, as it cleans out with 2,000 ft. of oil in the hole from a total depth of 5,240 ft.

In the Slaughter pool of Hockley County, Texas Co. No. 1-D Mallett, Labor 15, League 52, Scurry County School Lands, ½ mile east of a 5-mile western outpost producer, was rigging up standard tools at 4,812 ft. after setting 7-in. casing at 4,723 ft. Several other tests in the Slaughter field which are outposts to the main body of the field, yet are inside of the field's extremities, are either drilling ahead or are in the completion stages. There are some six active tests in the field.

Southern Basin

One of Schleicher County's new pool openers has been officially gaged, and the other is still in the testing stages. A Railroad Commission gage of 158 bbl. of oil daily was recorded for Lone Star Gas Co. No. 1 Humble-Bert Page, 11 miles southeast of Eldorado and in Section 30, Block L, G.H.&S.A. Survey. The well is bottomed in the Strawn of lower Pennsylvanian and is producing from a section topped at 5,727 ft. Harold B. Opp No. 1 J. T. Jackson, another new field opener, is being treated with acid through perforations in casing from 4,046-51 ft., total depth. The well recovered an average of about 20 bbl. of 34-gravity oil daily for 3 days prior to its preparation for acid.

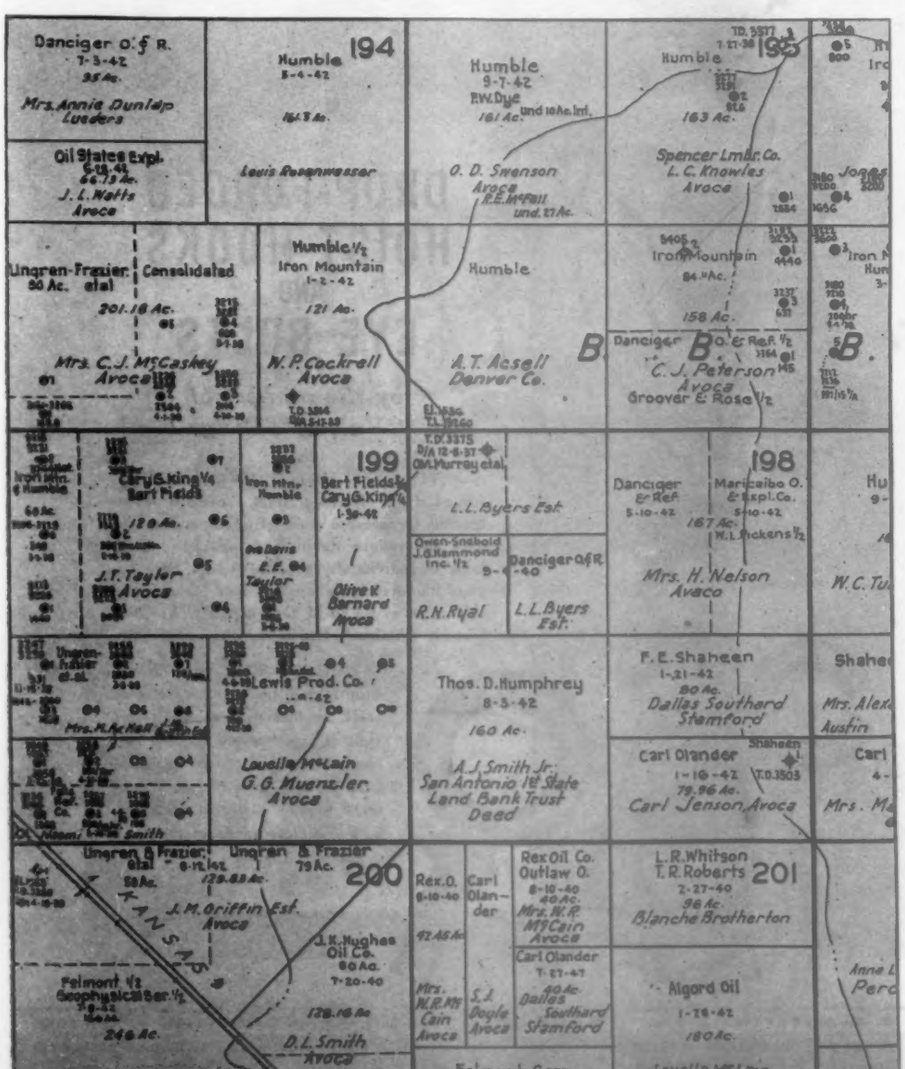
Ector County's list of closely watched wildcat tests had an addition during the week when Jack D. Bodkins of Midland staked location for his No. 1 H. S. Foster in the NE cor. Section 12, Block 43, T.&P. Survey, approximately 5½ miles due south of the Foster pool and 3½ miles south and slightly east of the Addis area.

Ector County's Sloan & Zook and Ferndale Drilling Co. No. 1 J. L. Johnson, indicating a possible linking of the North Cowden field and the Johnson field, was reported drilling below 4,207 ft. in lime after encountering shows of oil estimated ample for commercial production from 4,087-96 ft., 4,115-25 ft., and 4,137-52 ft. At 4,155 ft. the well headed 6 bbl. of oil and about 1½ hours later headed 15 bbl. of oil.

Large wells were reported in both the Tubbs area of western Crane County and the Emma pool of Andrews County. One of the largest wells in the Tubbs area has been completed by Humble Oil & Refining Co., No. 28 Tubbs, Section 10, Block 27-B, P.S.L. Survey extending production two locations north on the east side of the Tubbs pool. The well rated a daily potential of 4,403 bbl. after two-stage acid treatment at a total depth of 4,451 ft. One of the largest wells for the Emma pool was seen when Sinclair Prairie Oil Co. completed its No. 6 Cowden for 1,608 bbl. daily from 4,250 ft.

WEST CENTRAL TEXAS

Activity in Jones and Shackelford counties' Ivy-Avoca-Griffin trend led the developments as outposts



Southwestern Mapping Co., Fort Worth

East side of Avoca and west side of Griffin pools of Jones County in West Central Texas which show possibilities of being combined into one pool

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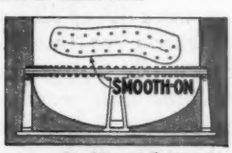

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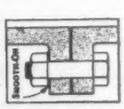

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were brought in for producers in both the Ivy pool and the Griffin pool and indications were seen for linking the Griffin pool and the original Avoca pool, now only about a mile and one-quarter apart.

The Ivy pool of northwestern Shackelford County has been extended on two sides with large producers. Northwest side was pushed an eighth of a mile at the test drilled by Tom B. Owens and W. F. Snebold in the W. H. McKeever lands. It flowed at the rate of 80 bbl. of oil per hour to indicate production of more than 2,000 bbl. daily. Saturation was drilled from 3,188-99 ft. Extending the west side of the pool a quarter mile Algord Oil Co. test in the E. P. Swenson lands flowed 247 bbl. of oil in 1 hour and 30 minutes from saturation at 3,189-93 ft. A quarter mile north of the Owens-Snebold extension, Tal-Vez Oil Co. was drilling in at its outpost which topped the lime at 3,190 ft. North extension to the pool was indicated when J. G. Hammond drilled 5 ft. into saturated Palo Pinto lime topped at 3,186 ft. Test is in the SE cor. of NE¼ Section 158.

Just southwest of the Ivy pool and on the same Palo Pinto lime producing trend, first indications were seen that the Avoca pool and the Griffin pool would be joined. The rapid rate of drilling in the Griffin pool during the past 6 months now rates it with the Avoca pool, there being 47 completed wells in each pool. Despite the fact there are two dry holes on the northeastern edge of the Griffin pool and one on the southwestern edge of the Avoca pool, the drilling of producing wells in the intervening area is expected within the next few months.

On a drilling block assembled approximately 2 miles southwest of the Griffin pool, Jones & Stasney have staked location for a new wildcat on the trend. The operators have tentatively located a test 1,320 ft. from the north and 440 ft. from the east lines of Section 28, Deaf and Dumb Asylum Lands. About 2½ miles farther south of this location, G. M. Gillespie is drilling ahead below 3,200 ft. at his wildcat test in the J. D. Samples lands, Section 45, Deaf and Dumb Asylum Lands.

The deep horizon for the Guitar pool of Jones County, indicated last week, has been completed for a gage of 40 bbl. daily. Well is producing from the lower Hope sand drilled from 2,115-39 ft. The original producing horizon for the pool is 2,000 ft. The new well is the R. B. Farris No. 12-A Guitar, Section 44, Block 15, T.&P. Survey.

The recently discovered Anzac pool of Coleman County registered considerable activity as the week closed with one outpost nearing the sand and another test getting started. Anzac Oil Corp. is drilling at 500 ft. at its No. 5-C Morris, offset to No. 4-C Morris which opened the pool. The new test is in the David Breeding Survey 728. States Oil Corp. of Eastland is drilling below 3,300 ft. on the No. 3 W. R. Stockard, south outpost to the discovery. It is in the SE¼ Section 23, T.&N.O. Survey.

WEST TEXAS COMPLETIONS

(24-hour gages)

Crane County

In the Tubbs field, Humble Oil & Refining Co. No. 28 Tubbs, 4,360-4,460 ft., 4,402 bbl.

Crockett County

In the Crockett pool, Gilcrease Oil Co. No. 5-13 University, 1,395-1,442 ft., 112 bbl.

Ector County

In the Goldsmith pool, Gulf Oil Corp. No. 184 Goldsmith, 4,182-4,213 ft., 693 bbl. Gulf Oil Corp. No. 196 Goldsmith, 4,138-4,209 ft., 2,872 bbl. Gulf Oil Corp. No. 197 Goldsmith, 4,135-98 ft., 401 bbl. Gulf Oil Corp. No. 199 Goldsmith, 4,081-4,181 ft., 1,960 bbl. Gulf Oil Corp. No. 201 Goldsmith, 4,167-92 ft., 1,263 bbl. In the Pennwell pool, Kewanee Oil Co. No. 5-A University, 3,380-3,650 ft., 1,910 bbl. Kewanee Oil Co. No. 6-A University, 3,370-3,652 ft., 1,152 bbl. Skelly and Atlantic No. 3-E University, 3,428-3,645 ft., 829 bbl. In the Harper pool, Stanolind Oil & Gas Co. No. 15-A E. F. Cowden, 4,040-4,196 ft., 1,159 bbl. Texas Co. No. 9-B Parker, 4,065-4,200 ft., 483 bbl. In the North Cowden pool, Stanolind Oil & Gas Co. No. 15 Roberts, 4,150-4,390 ft., 1,019 bbl. Texas Pacific Coal & Oil Co. No. 3 Holt, 4,287-4,467 ft., 936 bbl. Texon Oil & Land Co. No. 2-A Midland National Bank, 4,361-4,411 ft., 1,153 bbl.

Gaines County

In the Wasson-Denver pool, Amon G. Carter No. 3 W. M. Moore, 4,885-5,060 ft., 572 bbl.

Hockley County

In the Slaughter pool, Richardson Oils No. 1-B Slaughter, 4,882-4,975 ft., 1,639 bbl. Texas Co. No. 5 Bob Slaughter, 4,888-5,053 ft., 251 bbl.

Howard County

In the Snyder pool, Shasta Oil Co. No. 6 Texas Land & Mortgage Co., 2,530-2,847 ft., 1,415 bbl. Barron & Bryan No. 1 Davis-Cities Service Oil Co., 2,605-2,727 ft., 738 bbl.

McCulloch County

In the Noble-Johnson pool, Noble-Johnson No. 2 Patton, 1,590-1,600 ft., 6,500,000 cu. ft. of gas.

Pecos County

In the Payton pool, British American Oil Co. No. 24 Payton, 2,044-93 ft., 132 bbl. In the White & Baker pool, Cardinal Oil Co. No. 2-A-45 White & Baker, 1,660-1,719 ft., 122 bbl. Marvin & Henderson Oil Co. No. 2 Tippett, 475-501 ft., 24 bbl. Samwan Oil Co. No. 1 B. D. Young, dry and abandoned at 1,870 ft.

Schleicher County

In the Page pool, Lone Star Gas Co. No. 1 Bert Page, 5,730-46 ft., 158 bbl.

Upton County

In the Republic-Baker pool, J. Rife No. 8 Baker-Republic, 2,230-87 ft., 403 bbl. Shell Oil Co., Inc., No. 11 Baker, 2,148-2,795 ft., 690 bbl. Luse & Ice No. 9 Blair, 2,048-94 ft., 242 bbl. In the Sealy pool, Sinclair Prairie Oil Co. No. 5 Magnolia-Sealy, 3,040-53 ft., 414 bbl.

Yoakum County

In the Wasson-Denver-Bennett pool, Aloco Oil Co. No. 3 Keller, temporarily abandoned location. Aloco Oil Co. No. 2-B A. Miller, 5,018-5,176 ft., 828 bbl. Aloco Oil Co. No. 2 Walker, 4,920-5,174 ft., 723 bbl. Devonian Oil Co. No. 2 Ory, 5,020-5,128 ft., 1,228 bbl. Honolulu Oil Co.-Cascade Oil Co. No. 4-741 Willard, 4,995-5,225 ft., 781 bbl. Shell Oil Co., Inc. No. 2-A Baumgart, 4,845-5,157 ft., 889 bbl. Shell Oil Co. No. 3 Hodges, 5,020-5,236 ft., 894 bbl. Skelly Oil Co. No. 1 T. R. Rhodes, 4,920-5,130 ft., 813 bbl. Toddie L. Wynne, Tr. No. 3 Clawater, 5,050-5,225 ft., 974 bbl. Osage Drilling Co. No. 1 Miller, dry and abandoned at 5,106 ft.

WEST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Brown County

Groce Eakin No. 1 T. S. Williams, dry and abandoned at 1,104 ft. Ed Selvidge No. 6-A fee, dry and abandoned at 1,205 ft.

Callahan County

H. M. Black No. 1 J. R. Jones, dry and abandoned at 775 ft. J. & M. Drilling Co. No. 1 W. A. Ramsey, dry and abandoned at 722 ft. J. R. Hart No. 1 E. R. Beck, dry and abandoned at 650 ft.

Coleman County

States Oil Corp. No. 2 W. R. Stockard, 3,605-29 ft., 145 bbl.

Jones County

Bourn & Bradstreet No. 1 T. E. Richardson, 3,244-60 ft., 1,495 bbl. Humble Oil & Refining Co. No. 16 J. W. Hollums, 3,217-21 ft., 983 bbl. Lewis Production Co.

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No. 14 H. Sayles, Jr., 1,972-86 ft., 138 bbl. W. H. Peckham No. 3 Brock Estate, 1,885-1,911 ft., 600 bbl.

Shackelford County

Danciger Oil & Refining Co. No. 4 McGown, 3,155-3,201 ft., 1,200 bbl. J. A. Dickey and Dickey Brothers No. 1 D. Diller, dry and abandoned at 912 ft. Roeser & Pendleton and Continental Oil Co. No. 36-A-85 Cook, dry and abandoned at 1,464 ft.

PANHANDLE COMPLETIONS

(24-hour gages)

Carson County

Cities Service Oil Co. No. 31-A S. B. Burnett, 2,432-2,640 ft., 27,053,000 ft. gas. Magnolia Petroleum Co. No. 56 fee No. 244, 2,982-3,037 ft., 357 bbl. Skelly Oil Co. No. 95 Schafer Ranch, junked and abandoned.

Gray County

Sinclair Prairie Oil Co. No. 3 E. E. Reynolds, 3,000-18 ft., 20 bbl.

Hutchinson County

Hobbs Oil Co. No. 4 J. T. Hodges B, 2,970-3,050 ft., 120 bbl. Mid-States Oil Corp. No. 26-A J. A. Whittenburg, 2,675-2,725 ft., 476 bbl. Phillips Petroleum Co. No. 40 Cockrell Ranch, 2,952-3,060 ft., 530 bbl. Stanolind Oil & Gas Co. No. 13 W. B. Haile B, 3,014-65 ft., 210 bbl.

Moore County

Shamrock Oil Co. No. 1 J. P. Hight, 3,455-62 ft., 49,686,000 cu. ft. gas. Texoma Natural Gas Co. No. 7-TH Terry Thompson, 2,792-3,195 ft., 43,258,000 cu. ft. gas.

Potter County

Canadian River Gas Co. No. 3 R. B. Masterson, 2,010-2,280 ft., 37,347,000 cu. ft. gas.

California Fields

(Continued from Page 65)

5,625 ft. and plugged to 5,538 ft. where a high head water was encountered.

Los Angeles Basin

In the Huntington Beach field of Orange County, Southwest Exploration Co. completed another tideland well when No. 19 State was brought in pumping 702 bbl. of clean 25.4-gravity oil per day from 5,140 ft. This well is located in the upland area and has been bottomed beneath the tideland by directional drilling. In the Torrance field, where a town-lot drilling program was under way a few months ago but which is now as quiet as a graveyard, J. L. O'Donnell completed No. 72 Lomita flowing 281 bbl. of clean 29.1-gravity oil per day through a 40/64-in. bean from 5,201 ft. No. 1 Kirby of Bankline Oil Co. in the Rosecrans field of Los Angeles Basin proved to be a distinct disappointment upon completion a few days ago as it was good for only 30 bbl. of 33.1-gravity oil cutting 2 per cent from 7,723 ft. This well first wound up on the wrong side of a fault but was subsequently whipstocked to the west and bottomed in oil sand. The well has a string of 7-in. casing landed at 7,565 ft. and gun-perforated at 7,500-15 ft. and at 7,460-490 ft. Continental Oil Co. will soon be in a position to begin drilling a new wildcat in Los Angeles Basin and the Los Angeles city council has prepared an ordinance which permits the starting of work on the 565 acres of potentially productive acreage in the San Fernando Valley near the city of that name and west of Balboa Avenue. The application filed by Continental Oil Co. covers the largest parcel of property open for drilling in that area. Barnsdall Oil Co. focussed the attention of operators on this section of the state about 2 years ago by completing a commercial well on the Rancho San Francisco and this find was augmented later by successful wildcat work of Tide Water Associated Oil Co. in Aliso Canyon.

Coastal Area

Tide Water Associated Oil Co. completed a flowing well in the Ventura Avenue field when No. 34 Ventura Land & Water was finished flowing 1,095 bbl. of 29.6-gravity oil and 825,000 cu. ft. of gas per day from a depth of 7,700 ft. The well was brought in flowing through a 128/64-in. bean and was finished with a 9⅝-in. water string landed at 6,480 ft., a 7-in. string at 7,520 ft. and 216 ft. of 5½-in. liner including 152 ft. of 500-mesh perforated landed at 7,695 ft. No. 40 Ventura Land & Water of the same company, the most easterly well in the field to penetrate the deep 57 zone, tested wet on a formation test late this week and has been recemented. This potential producer is bottomed in oil sand at 10,769 ft. and on a formation test flowed 310 bbl. of 29.1-gravity oil cutting 20 per cent through a 24/64-in. tester bean. British American Oil Producing Co., which recently completed an excellent flowing well on the Hartman lease in the Ventura Avenue field in conjunction with Belsa Chica Oil Co., has spudded in No. 8 Hartman, and Lloyd Corp. which recently completed No. 2 Dabney Lloyd as an excellent well, is rigging up rotary drilling equipment in No. 3 on the same lease preparatory to an early spud. After a costly grading job, Continental Oil Co. has completed derrick for No. 12 Grubb in the San Miguelito field and spud will be made upon completion of No. 11 Grubb which is nearing completion.

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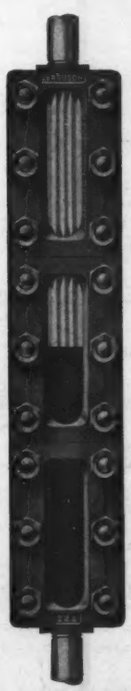

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North Louisiana, Arkansas

Magnolia Field in Arkansas Has Prospective Extension

By
GEORGE WEBER

SHREVEPORT, La., July 3.—Drill-stem tests and approaching production tests on a number of North Louisiana wildcats and outposts attracted attention during the past week in the tri-state area. In Webster Parish, the deep Sibley test, Union Producing Co. No. 1 Walker Unit, was plugged back and will test an oil show in the lime, while the east outpost to Bear Creek, Hunt Oil Co. No. 1 Loe is setting casing for an early production test. The deep Pine Island test, Stanolind Oil & Gas Co. No. 131 Dillon made a drill-stem test during the week, showing gas, before drilling ahead. In South Arkansas, a new oil zone was showing production in the Rainbow City or Champagnolle district of Union County.

Sibley Test

The Union Producing Co. No. 1 Walker Unit, in Section 30-18-8, on the southeast flank of the Sibley-Dubberly gas structure, was plugged back from a total depth of 10,383 ft. to a lime zone which showed oil at 5,870 ft. The casing will be perforated at 5,830-60 ft. this week-end. The well was drilled 300 ft. into the lower Marine formation without finding a show of oil or gas. The formation was topped several hundred feet lower than in the Cotton Valley field, a few miles to the northwest, where the lower Marine produces in the prolific Bodcaw sand. If commercial production is not found at the present testing level, the well will be plugged back further to explore other zones which showed production possibilities.

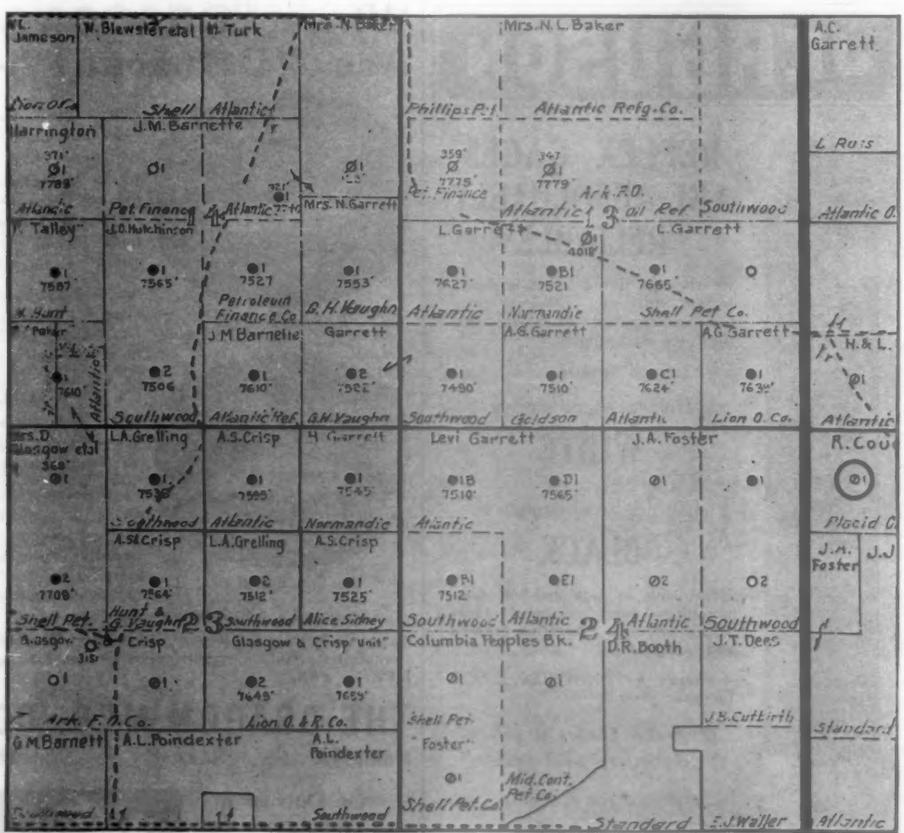
The Bear Creek field of Webster Parish is due for a new gas-distillate well when the Hunt Oil Co. No. 1 Loe, an east outpost is completed. The Hunt well, after reaming down to total depth at 6,678 ft., is setting casing for a production test early this week.

To the west in Bienville Parish, Arkansas-Louisiana Gas Co. No. 2 Gayoso, located in the Bisteneau field, is drilling in hard sand below 8,430 ft. This well showed 750 ft. of mud cut with gas in 107 minutes recently on a drill-stem test at 8,310-8,404 ft.

A southeast outpost to the Sligo field of Bossier Parish, H. M. Harrell No. 1 Thompson Unit is drilling below 2,629 ft.

Pine Island Deep Test

The tri-state's most important deep well, Stanolind Oil & Gas Co. No. 131 Dillon, drilling in the old Pine Island field of Caddo Parish, tested the Herndon sand of the Travis Peak formation, and at the end of the week was waiting for cement to set with 10¾-in. casing at 4,520 ft. The operators topped the Travis Peak at 3,903 ft., and cored oil sand at 3,912-20 ft., 3,922-26 ft., and 3,941-45 ft. A drill-stem test at 3,900-47 ft. recovered 170 ft. of mud, with a show of oil, and 400 ft. of salt water, with a tool pressure of 62 lb. in 7 minutes, using ⅝-in. chokes top and bottom. The test is projected to the deep lower Marine formation where a good structure is indicated.



Globe Map Co., Shreveport

Eastern extension to the Magnolia field of Columbia County, Arkansas, was brought in when Placid Oil Co. completed No. 1 Couch. The well topped porous lime above the gas-oil contact, giving it 189 ft. of oil saturation

A Tensas Parish wildcat, Continental Oil Co. No. 1 Cammack, in Section 31-13-12e, 9 miles north of the town of St. Joseph, cored into salt at 4,124 ft., and was coring the salt at 4,135 ft. at latest reports.

The Hope Gas & Oil Co. is reported planning to drill 15 wells in the Munroe field of Union Parish.

ARKANSAS FIELDS

In the Magnolia field of Columbia County, South Arkansas, the Placid Oil Co. set casing on No. 1 Couch, an east edge test. The well, due for completion shortly, topped porous lime about 15 ft. above the gas-oil contact, giving it the full 189 ft. of oil-saturated section in the lime, between the gas cap and the water level. This extension, added to the mile westward extension, made the previous week by the G. H. Vaughn No. 1 J. Jones, will add to activity in the field. Two offsets to the Vaughn well are already begun on the west.

A wildcat which will be closely watched is the Amerada Petroleum Corp. No. 1 Bradley Lumber Co. in Section 14-17-10, Bradley County. The test was spudded late in the past week.

Production by Pools

Estimated daily gross production, all companies, week ending June 30, follows:

NORTH LOUISIANA

	Bbl.
Bellevue	550
Caddo, light	4,425
Caddo, heavy	2,430
Converse	535
Cotton Valley, heavy	65
Cotton Valley, light	*11,495
Cross Lake	7,440
De Soto and Red River	1,155
Elm Grove	255
Haynesville	2,960
Holly	80
Homer	2,780
Lisbon	2,895
Pleasant Hill	95
Rodessa	27,420
Sarepta-Carterville	†450
Sligo	785
Sugar Creek	265
Urania	2,760
Zwolle	2,800
Total North Louisiana	71,640

SOUTH ARKANSAS

Atlanta	395
Buckner	1,980
Champagnolle	1,400
El Dorado	1,695
Lewisville	110
Lisbon	250
Magnolia	10,170
Miller County	285
Nevada	620
Rodessa	3,970
Schuler	18,040
Smackover, light	1,920
Smackover, heavy	14,725
Stephens	555
Troy	945
Urbana	1,070
Village	875
Total South Arkansas	59,005
Texas side of Rodessa field, bbl. daily	28,695

*4,125 bbl. is distillate. †190 bbl. is distillate.

New Champagnolle Sand

The Graves sand, an important producing zone at Smackover was producing in the Champagnolle or Rainbow City field of Union County this week, as the J. R. Lockhart No. 1 P. Jerry, 665 ft. west, 235 ft. south, NE cor. NE SE Section 15-17-14, flowed 35 bbl. daily through the tubing. The oil sand was found at 2,612-17 ft., and a drill-stem test made at 2,606-17 ft. recovered 1,600 ft. of clean oil in 15 minutes with a 50-lb. tool pressure. Bottom-hole pressure was estimated at 350 lb. Seven-inch casing was run to 2,606 ft., with total depth at 2,617 ft.

(Continued on Page 111)

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Michigan Field Report

By
O. C. PRESSPRICH

7,440-Barrel Well in Walker Township Pool, Kent County

SAGINAW, Mich., July 3.—Kent County's Walker Township pool contributed another spectacular performer to the list of big Michigan producing wells this past week and in so doing relegated highly successful developments in two other southwestern fields to secondary interest.

Lenoran Petroleum Co. completed the big well, rated at a potential of 7,440 bbl. a day, naturally The well, one of the best producers to date, is No. 1 Nelson Maynard, NW SW NW Section 4-6n-12w, completed at 1,769 ft. Also unusually good was the Swanson Consolidated Oil Co. No. 2 Van Dyke, in adjoining Section 5, completed at 1,767 ft. for production gaged at 2,460 bbl. a day naturally. Otherwise Kent County activity was at about the usual rate.

Principally because of the two big wells, potential crude production in Michigan last week was increased by the especially large total of 17,250 bbl. a day from 20 new oil wells. The week's list of completions included 10 dry holes abandoned, two small gas wells and two instances where operators abandoned locations.

The Columbia field development in Van Buren County continued to pay well. In that area there were seven producing completions, three of the new wells rating 1,000 bbl. potential daily. Interest in the Salem field in Allegan County also increased as all six completions in that township rated as commercial wells good for from 100 to 1,000 bbl. a day.

Best of the Salem completions was Socony-Vacuum Oil Co. No. 5 Theresa Weber in Section 11. The well was acidized at 1,579 ft. and got production estimated at 1,000 bbl. a day. There were two new wells completed in Section 22, one good for 300 bbl., the other for 200 bbl. a day.

All three completions rated as 1,000-bbl. producers in Van Buren's Columbia field are located in Section 23. They are the Nos. 2 and 3 Leo P. Parisians, and the J. H. Fitchett Trust No. 1 Fox Heirs.

American Drilling Co. got another 1,000-bbl. well in Section 29 of Redding Township, Clare County. In New Haven, Gratiot County, a new gas well rated 1,800,000 cu. ft. daily, while in a small developed area in Dundee Township of Monroe County a small gasser, good for only 108,000 cu. ft. a day, was reported.

The week's 10 dry holes were scattered through various sections of the state as drillers abandoned tests in Calvin Township, Cass County; Bentley Township, Gladwin County; Otto Township, Oceana County, and Georgetown Township, Ottawa County.

Twenty-six permits were issued by the State Conservation Commission during the week for new development, the new wells being planned for the most part in the Walker, Columbia and Salem fields.

Following is the summary of the Michigan completions last week:

Allegan County

Dorr Township (4n-12w)—Arthur F. Shaw abandoned No. 1 Geitzen, NE NW NW Section 11, when the wildcat test failed to show any indication of oil at a depth of 802 ft.

Hopkins Township (3n-12w)—Bell Marks, Inc., completed a small producer, No. 2 H. Klomparens, SW SW NW Section 23, at 1,640 ft. After the well was acidized it produced at the rate of 60 bbl. daily.

Salem Township (4n-12w)—All six completions in the Salem field were producers, having a combined daily potential of more than 2,200 bbl. W. R. Borough, Inc., No. 1 John Shuck, SW SW NW Section 2, completed at 1,693 ft., produced 100 bbl. daily after being acidized. Acidized on completion at 1,671 ft., production was rated at 300 bbl. daily for the American Drilling Co. No. 1 Mary Loew, SW SE SE Section 3. Acidization at 1,628 ft. increased the daily potential to 365 bbl. from the Gordon Oil Co. No. A-1 William Miller, NE NW NE Section 10. The field's best new well is Socony-Vacuum Oil Co. No. 5 Theresa Weber, SW NW NW Section 11, completed at 1,579 ft. and rated at 1,000 bbl. a day after acid treatment. Two new producers were completed in Section 22, No. 1 Dean-Byers, NE SW NE, a Salem Gas & Oil Co. development, rating 300 bbl. daily, while the J. V. Wicklund Development Co. No. 1 Alois Smith, NE NE NE, produced at a 200-bbl. rate. Both the Dean-Byers, finished at 1,582 ft. and the Smith, at 1,575 ft., were improved by acid treating.

Cass County

Calvin Township (7s-14w)—N. R. Dodd abandoned No. 1 H. and S. Fierek, SW SE NW Section 9, after drilling to 865 ft.

Clare County

Redding Township (19n-6w)—Usual success attended another of the orderly Redding field developments as American Drilling Co. completed No. 2 Ida B. Newcomer, S½ SE SE Section 29, at 3,887 ft. Production naturally was gaged at 1,060 bbl. daily.

Gladwin County

Bentley Township (17n-2e)—Failure marked the McClanahan Oil Co. venture into Section 27 when No. 1 Edith Petrovsky, NE SE SE, failed to show oil. It was abandoned at 3,622 ft.

Gratiot County

New Haven Township (10n-4w)—L. M. Conarton and P. Meriam completed a small gas well, No. 1 Frazer, N½ SW SE, at 994 ft. Its output was gaged at 1,800,000 cu. ft. a day.

Kent County

Walker Township (6n-12w)—Rating among the best wells ever brought in in southwestern Michigan, Lenoran Petroleum Co. reported No. 1 Nelson Maynard, NW SW NW Section 4, had a potential production of 7,440 bbl., naturally, on completion at 1,769 ft. Also an excellent new producer is Swanson Consolidated Oil Co. No. 2 Van Dyke, NE SW NE Section 5, rated at 2,460 bbl. daily, naturally. Its total depth is 1,767 ft. In contrast, No. 2 Stanley Orlik and others, SE NE NW Section 5, a Wolverine Natural Gas Corp. development, completed at 1,779 ft., rated only 50 bbl. daily after being acidized.

Walker Township (7n-12w)—Locations for two tests were abandoned. They were the Swanson Consolidated Oil Co. No. 3 John Slykhouse, SW SW SE Section 32, and the Edward B. Strom No. 1 Conrad, SE NE SW Section 33. Ide & Glavin completed No. 3 Riverside Sand & Gravel Co., SE SW SW Section 33, to get 250 bbl. a day. Total depth of the well is 1,776 ft.

Wyoming Township (6n-12w)—A moderately successful completion was reported by Pyramid Oil Co., in this township adjoining Walker, as the No. 1 J. A. Carroll, NE NE SE Section 4, was acidized to increase output to 250 bbl. daily. Total depth was 1,747 ft.

Oceana County

Otto Township (13n-16w)—White River Land Co., exploring in Section 27, abandoned as dry at 2,454 ft. No. 1 fee, NE SE NW.

Ottawa County

Georgetown Township (6n-13w)—Century Oil & Gas Co. abandoned No. 1 John Victory Estate, NW NW SE Section 27, at 1,703 ft.

Monroe County

Dundee Township (6s-6e)—In Dundee's restricted producing area, scene of occasional exploration, A. V. Oil & Gas Co. completed a small gas well. It is No. 1 Roy and Floyd Roe, SW SE NW Section 30, producing 108,000 cu. ft. daily. Total depth of the test is 2,126 ft.

Van Buren County

Bloomingdale Township (1s-14w)—Three dry holes marked new developments here. These were Goens No. 1 F. and M. Harris, SW SW SW Section 6, at 1,241 ft.; Fisher & McCall, Inc., No. 1 L. Cook, SE NE NE Section 10, at 1,315 ft., and the G. A. and R. D. McQueen No. 1 J. W. Hoffman, NE SE SE Section 33, at 1,359 ft.

Columbia Township (1s-15w)—Seven additional oil wells in Columbia Township swelled potential by approximately 3,500 bbl., as three of the new wells rated 1,000 bbl. a day each. The list: H. Leman, trustee, No. 2 Walter Smith, SE NW NE Section 11, producing 100 bbl. daily after being acidized, total depth being 1,160 ft.; Forrest Ruby No. 1 Walter Smith, NE SE NE Section 11, acidized at 1,182 ft., producing 30 bbl.; W. E. Dotson No. 2 Roy Stockton, NE SW NE Section 12, completed at 1,188 ft., acidized for 160 bbl. a day; M. M. Rozan No. 1 Maye Post, NE NE NE Section 13, acidized at 1,204 ft., producing 200 bbl.; and these three, each rated at 1,000 bbl. a day, all in Section 13, O. O. Borden No. 2 Leo P. Parisian, NE SE NE, completed at 1,203 ft., Borden's No. 3 Parisian, NE SE NW, completed at 1,207 ft., and the J. H. Fitchett, trustee, No. 1 Fox Heirs, NW NE NW, completed at 1,198 ft.

Pine Grove Township (1s-13w)—Two Pine Grove exploratory tests were abandoned as dry holes at 1,369 and 1,351 ft. respectively. They were the Glen McCoun, trustee, No. 1 Steve Filip, SW SW NE Section 18, and the H. Brown Cannon, trustee, No. 1 C. D. Rendal, NE SW NW Section 19.

Eastern Fields

(Continued from Page 60)

at 930 ft. in the Rosa Boggess test and made a location on the Roy Phost farm. In Washington district, United Carbon Co. is down 4,750 ft. in No. 4 Elizabeth W. Perkins.

In Pleasants County, the test of the Columbian Carbon Co. on the Hammat consolidation farm in Grant district is 5,300 ft. deep, or 71 ft. in the Oriskany, with no showing.

New Work

In Boone County, the Ottowa Gas Co. will drill on the Morry Francis Ellis and others farm on Spruce River, in Washington district, elevation 818.5 ft.

In Calhoun County, Metz Farm Oil Co. made location for No. 6 on the Peter Metz farm on Leading Creek in Sheridan district. Hope Natural Gas Co. has a location for No. 2 Allen Hardman, in Sherman district, elevation 1,067 ft.

In Cabell County, West Virginia Gas Corp. is building a rig on the J. H. Adkins farm, McComas district, elevation 763.5 ft. In Doddridge County, I. G. Pigott will drill on the W. P. Pratt farm, West Union district, elevation 85 3ft.

In Gilmer County, Pittsburgh & West Virginia Gas Co. made a location for No. 7656 H. H. Berry, in Glenville district, elevation 755 ft. In Center district, Hope Natural Gas Co. will deepen No. 7505 Ora L. Boggs.

In Ritchie County, W. A. Bickerstaff made a location on the R. E. Britton farm, Union district, Middle Fork of Hughes River. Here, the Pittsburgh & West Virginia Gas Co. will deepen No. 6113 E. D. Maxson, elevation 1,046.5 ft. In Murphy district, Patterson and Pope will drill No. 8 Harry W. Patterson, on Laurel Run. In Grant district, Bickel Oil Co. made a location for No. 8 Hall & Tetrick, on Long Run.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., July 1.—A recent survey of Turner Valley crude production as checked through 1-in. choke shows a potential of 58,596 bbl. for 73 wells. The average gas-oil ratio is 2,780 ft. per bbl., indicating considerable improvement as a result of the Conservation Board's control measures. The estimated potential does not include several recent completions on which allowables have not been fixed. Aggregate allowable, fixed at 27,000 bbl. a day on June 13, will likely be increased to a peak of around 30,000 bbl. later in the summer.

Turner Valley Completions

Three wells operating under temporary allowables of 225 bbl. each pending official test are East Crest Oil Co. No. 4, LSD 8, Section 6-19-2w5, finished at 8,040 ft.; York Oils No. 2, LSD 6, Section 20-18-2w5, finished at 8,026 ft.; and Okalta Oil Co. No. 8, LSD 6, Section 16-18-2w5, bottoming at 7,102 ft. Acidizing of the York and Okalta wells was delayed by bad road conditions.

In Section 32-18-2w5, George Harris and associates No. 2, LSD 15, finished at 7,565 ft. after getting the Madison at 7,100 ft., showed good porosity in both horizons and looks like a large well. It is being acidized. Oil Ventures No. 1, LSD 14, finished at 7,807 ft. after getting the lime at 7,353 ft., blew into production under its own gas, making around 700 bbl. a day before acidization, and is expected to rank with the major producers. Neil McQueen and associates of Vancouver financed completion of the test.

Tests in the Lime

British Colonial Oils No. 1, LSD 5, Section 32-18-2w5, is finishing in the lime below 8,208 ft., and will likely be the next completion. Anglo-Canadian Oil Co. No. 4, LSD 6, Section 17-18-2w5, which got the Madison at 7,855 ft., is deepening below 8,100 ft. after cementing casing 10 ft. in. West of the main field, Anglo-Canadian No. 5, LSD 8, Section 31-18-2w5, is below 8,438 ft. after getting the lime at 8,177 ft. A drill-stem test of the upper porous zone indicated strong showings of oil and gas, and completion is expected in a few days. In Section 5-19-2w5, West Central area, Winalta Royalties No. 1, LSD 1, got the Madison at 6,797 ft. and cemented casing at 6,807 ft.

West Central Area

In Section 25-19-3w5, West Central Turner Valley, Argus Royalties No. 1, LSD 14, is in the Blairmore formation below 3,579 ft.

In Section 13-10-2w5, Sunray Oil Development Co., organized by Montreal interests, is financing completion of the well from 2,560 ft., where it has been standing for several months. The organization is sponsored by a group headed by Dr. Henry Laureys, with C. G. Beausoleil, also of Montreal, as vice president and managing director.

In Section 7-19-2w5, Anglo-Canadian Oil Co. No. 8, LSD 11, is below 3,117 ft. In Section 5-19-2w5, Calwin Royalties No. 1, LSD 15, is below 6,678 ft. and on top of the limestone. Royalite Oil Co. No. 40, LSD 4, same section, is in the Blairmore formation below 6,786 ft.

West Side Drilling

In Section 32-18-2w5, Royalite Oil Co. No. 42, LSD 4, is in the Benton formation below 4,142 ft.

In Section 29-18-2w5, Royal Canadian Oil Co. No. 3, LSD 12, is below 5,960 ft. after getting the cardium sandstone marker at 5,590 ft. Command Oils No. 2, LSD 11, is working on cellar and moving equipment. It will spud early this month. Royalite Oil Co. No. 39, LSD 3, is in the Blairmore formation below 7,121 ft.

In Section 17-18-2w5, Extension Royalties No. 2, LSD 11, is in the Blairmore below 6,849 ft. Anglo-Canadian Oil Co. No. 6, LSD 3, is below 6,805 ft. and getting close to the Madison. Royalite Oil Co. No. 41, LSD 1, is below 5,700 ft. after getting the cardium sandstone.

West of the main field, Scottish Petroleums No. 1, LSD 16, Section 19-18-2w5, is below 8,411 ft. It entered the Kootenay at 8,210 ft. and is getting close to the Madison.

North Turner Valley

Home Oil Co. No. 3 Millarville, LSD 1, Section 33-20-3w5, is rigging.

On the Whiskey Creek structure, Mar Jon Oil Co. No. 5, LSD 1, Section 5-22-4w5, has camp buildings up and cellar dug. Standard outfit from South Turner Valley will be used.

Pouce Coupe Test

On the Pouce Coupe structure, in the northern foothills west of Peace River, Benedum & Trees, of Pittsburgh, Pa., will resume work on Guardian Oil Co. No. 1, Section 7-80-12w6, as soon as equipment arrives from Calgary and the United States. Drilling will resume from 2,460 ft., and may be carried to 5,000 ft. Agreements for development of 175,000 acres by the Pittsburgh firm have been ratified by shareholders of Guardian Oil Co. and W. J. Jones, production manager of the Benedum corporation, recently left for the field. In addition to completion of No. 1 Guardian, extensive geological work will be undertaken this season as a guide to further systematic development.

Tests in the Foothills

On the Brazeau structure west of Edmonton, Home Oil Co. No. 1, LSD 16, Section 7-43-17w5, is running 8-in. casing to bottom at 5,950 ft. and will carry casing behind the tools when deepening.

On the Jumping Pound structure west of Calgary, Rabson Oils No. 1, LSD 3, Section 36-24-5w5, is below 1,595 ft. with casing set at 733 ft., and believed in the upper Benton, with test logging somewhat higher than in Turner Valley. The old Imperial well on the same structure is being cleaned out to increase the gas supply for drilling fuel. Roxana Petroleums, which holds acreage on the same structure, is planning to drill several miles north and west of the Rabson well.

Border Fields

On the Del Bonita structure south of Lethbridge, Trans Alberta Oils is drilling a series of structure tests, under supervision of H. M. B. Inglis, in preparation for a commercial test which will likely be drilled on acreage closer to Terminal Oils No. 1 in NE Section 18-1-21w4.

South of Oyen

M. J. Davies, president of Davies Petroleums, Ltd., has personally filed on 1,600 acres and taken out a prospecting permit on 46,000 acres about 20 miles south of Oyen, in eastern Alberta. About 10 years ago, Fuego Oils No. 1, LSD 16, Section 34-25-4w4, was carried to 3,182 ft., getting the limestone at 3,100 ft. with a good show of gas and some heavy crude. Russell V. Johnson, of Calgary, will geologize the structure for Mr. Davies.

Castor Operations

In the Castor district, Castor Holdings, Ltd., of Edmonton, will endeavor to pull casing from the Castor municipal well, drilled in 1914 in NW Section 26-37-14w4. The test, discontinued at 1,455 ft., got a fair gas show which was drowned out by water. The company, which has secured a 10-year natural gas franchise for the town, will drill a test for gas in a new location just north of the residential section.

Lloydminster Field

Lloydminster Royalties No. 1, LSD 4, Section 36-49-1w4, which got crude production at 1,925 ft., has drilled out cement and is cleaning hole. An 8,000-ft. gas line is being laid to provide pressure for a gas-lift pumping unit, and storage tanks of 750 bbl. capacity have been erected. Arrangements are being made to sell the output for fuel oil.

Saskatchewan Operations

In western Saskatchewan, Vera Oilfields No. 2, LSD 5, Section 23-41-24w3, has been plugged back to 2,090 ft. for a test of the crude horizon, where commercial production was indicated. Owing to the small hole a new well will be drilled to test the Devonian lime.

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Gulf Coast Fields

(Continued from Page 72)

lb. and shut-in casing pressure 1,010 lb. The rig is being moved northeast for No. 2 Fontenot, while locations were made due north and southeast for Nos. 3 and 4 Fontenot. The discovery well was drilled on a farmout lease from the Sun Oil Co.

Magnolia Petroleum Co. No. 12-A West, a new-sand discovery on the west side of the West Ranch field, Jackson County, is cleaning out through a ⅛-in. choke, flowing 75 per cent oil and 25 per cent water. Tubing pressure is 75 lb. and shut-in casing pressure 700 lb. About 1½ miles north of the field Lonie Glasscock No. 1 J. H. Drummond flowed 187 bbl. on a 24-hour potential test. The test was made through a 9/64-in. choke under a tubing pressure 570 lb. and casing pressure 1,025 lb. Locations for two wells offsetting the latter producer were made by Humble Oil & Refining Co. No. 1 Toney, an east offset, is located in the R. Musquez Survey, while southeast No. 1 State is located in Lake Menefee, also in the Musquez Survey.

Aldine Area

In the Aldine area, Harris County, E. C. Hankamer and others No. 1 Rowlan, originally completed as a distillate producer at 7,165-70 ft., was killed the past week, and the casing was reperforated at 6,642-48 ft. On a 15-hour gage, flowing through a ⅛-in. choke, the well flowed 11 bbl. of distillate under a tubing pressure of 625 lb. and casing pressure 2,500 lb. Southwest of the discovery well, Texas Gulf Producing Co. No. 1 Hairgrove, recently abandoned at 7,089 ft., is being rigged up to deepen to 7,500 ft. Decision to deepen the hole resulted from the showing in the Rowland test.

Kirby Petroleum Co. and others No. 1 Hillebrenner, north Fairbanks area, Harris County, is cleaning out showing wash water and gas from perforated casing at 6,842-46 ft. The well is located about a half-mile southeast of the same company's No. 1 Daniel, a 7,100-ft. distillate producer. The 6,800-ft. sand corresponds to the sand in the field proper, and on a drill-stem test showed pipe line oil.

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

Brazoria County

Danbury field: McDannald Oil Co. No. 1 Slocum, 7,765 ft., abandoned. Hastings field: Humble Oil & Refining Co. No. 17 Cecil Brown, sand 5,945-6,050 ft., 667 bbl., ¼-in. choke. Old Ocean field: Sun Oil Co. No. 1 Barsodi, 10,615 ft., 410 bbl., ⅛-in. choke.

Chambers County

Anahuac field: Gulf Oil Corp. No. 2 Peterson, sand 7,158-64 ft., 480 bbl., ¼-in. choke. Humble Oil & Refining Co. No. 17 Broussard, 7,100 ft., 720 bbl., ¼-in. choke.

Fort Bend County

Thompson field: Humble Oil & Refining Co. No. 9 Davis, sand 4,284-4,345 ft., 128 bbl., ½-in. choke. H. M. Naylor No. 4 Musselman, sand 7,650-7,817 ft., 362 bbl., ¼-in. choke.

Galveston County

Dickinson field: F. W. Bennett No. 1-B Broughton, sand 8,038-56 ft., 63 bbl., 14/64-in. choke.

Harris County

Eureka field: Means & McGehee No. 1-F Laura Lackner, perforated casing 7,713-18 ft., 481 bbl., ¼-in. choke. Fairbanks field: Stanolind Oil & Gas Co. No. 4 Jahnke, sand 6,785-6,845 ft., 148 bbl., ¼-in. choke. Union Producing Co. No. 7 Whitehead and others, perforated casing at 5,840-45 ft., 146 bbl., ½-in. choke. Friendswood field: Humble Oil & Refining Co. No. 21-B Humble-West, sand 6,040-65 ft., 470 bbl., ¼-in. choke. Humble Oil & Refining Co. No. 25-B Humble-West, sand 6,018-42 ft., 427 bbl., ¼-in. choke. Tomball field: Humble Oil & Refining Co. No. 4 Henrichs, sand 5,575-88 ft., 16 bbl., ¼-in. choke.

Jefferson County

South China field: Hebert & Smith and others No. 1 Fontenot perforated casing 7,872-85 ft., 102 bbl., 12 hours, 9/64-in. choke.

Jackson County

Cordelle field: H. J. Porter No. 2 Ackly, 3,588 ft., abandoned. H. J. Porter No. 1-B Drushel, perforated casing 2,537-41 ft., 324 bbl., ⅛-in. choke. West Ranch field: L. G. Glasscock No. 1 J. H. Drummond, sand 5,524-43 ft., 187 bbl., 9/64-in. choke.

Liberty County

Hardin field: Atlantic Refining Co. No. 1-C Johnson-Finley perforated casing at 7,595-98 ft., 78 bbl. ½-in. choke. Hankamer field: Hatton Production Co. No. 1 Crow and Jacobs perforated casing at 5,098-5,104 ft., 600 bbl., ¼-in. choke. Hull field: Republic Production Co. No. 98 Dolbear, sand 2,371-86 ft., 812 bbl., ¼-in. choke.

Orange County

Port Neches field: Texas Co. No. 7 Stark, sand 5,934-5,947 ft., 198 bbl., ⅛-in. choke.

Wharton County

Magnet field: Humble Oil & Refining Co. No. 14 H. C. Cockburn, 5,540 ft., 48 bbl., ⅛-in. choke. Withers field: Texas Co. No. 11 J. E. Broussard, 5,547 ft., 103 bbl., ⅛-in. choke.

Southwest Texas Fields

(Continued from Page 75)

marked up as dry holes. In Cameron County, Salviejo and Pure Oil Co. No. 1 Gatewood and Dewberry, San Martin grant, was abandoned at a total depth of 7,579 ft. Additional development is expected in the area as the well attempted to blowout and showed extremely high gas pressure. In Willacy County, Midwest Royalty Co. No. 1 Dayton, 3½ miles west of Lyford, San Juan Decarriutas grant, Share 47, was abandoned at 9,016 ft. with no shows reported.

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

Aransas-San Patricio Counties

McCampbell field: Manahan Oil Co. No. 2 Carlock, perforated casing 7,128-35 ft., 110 bbl., 9/64-in. choke.

Caldwell County

Dale field: Ralph Ogden No. 2 Moore, 2,251 ft., 89 bbl., pumping. Salt Flat field: Stroberg & Wolf No. 1 Smith, 2,670 ft., 51 bbl. oil, 6 bbl. water, pumping. Wiegand Brothers No. 6-A Briscoe, 2,727 ft., 18 bbl. oil, 300 bbl. water, pumping.

Calhoun-Victoria Counties

Heyser field: Gulf Oil Corp. No. 19-B Traylor, 5,497 ft., 97 bbl., ½-in. choke.

Duval County

Cedro Hill field: Magnolia Petroleum Co. No. 11 Duval County Ranch Co., sand 1,438-41 ft., 100 bbl., jetting. Fitzsimmons field: Navarro Oil Co. No. 2 Mew, perforated casing 4,246½-50 ft., 59 bbl., ⅛-in. choke. Hoffman field: Magnolia Petroleum Co. No. 37 Well, sand 2,836-46 ft., 120 bbl., 8 hours, ½-in. choke. Rancho Solo field: Clark & Cowden No. 1-B Peters, perforated casing 1,808-20 ft., 85 bbl., pumping.

Guadalupe County

Darst Creek field: Camp Oil Co. No. 5 Malaer, 2,618 ft., 35 bbl. oil, 100 bbl. water, pumping. Nancy Lee Oil Co. No. 4 Wilson, 2,631½ ft., 35 bbl. oil, 150 bbl. water, pumping. United North & South Development Co. No. 13 Dix., 2,557 ft., 96 bbl. oil, 331 bbl. water, pumping.

Hidalgo County

Samfordyce field: R. S. Dean, Jr. No. 2-B Guerra, perforated casing 2,842-49 ft., 65 bbl., pumping.

Jim Hogg County

Colorado field: Humble Oil & Refining Co. No. 3 Atwood, 3,046 ft., 74 bbl., ⅝-in. choke. Kelsey field: Humble Oil & Refining Co. No. 13 McGill, 4,728 ft., 105 bbl., 7/64-in. choke. Humble Oil & Refining Co. No. 14 McGill, 4,730 ft., 130 bbl., 9/64-in. choke.

Jim Wells County

Camada field: Tom Graham No. 1 Muil, 7,010 ft., abandoned. H. H. Howell No. 1 Hoffman, perforated casing 5,535-40 ft., gas well. East Premont field: Magnolia Petroleum Co. No. 12 Seeligson, perforated casing 6,578-83 ft., 180 bbl., 5 hours, ¼-in. choke.

Live Oak County

White Creek field: Coquat-Holland and others No. 1 Bonham, sand 1,682-99 ft., 46 bbl., pumping. Holland, Brauer and others No. 3 Gayle, perforated casing 1,411-22 ft., 125 bbl., ⅛-in. choke.

Nueces County

Clara Driscoll field: O. W. Killam No. 4 Webb, perforated casing 5,103-08 ft., 167 bbl., 9/64-in. choke. Luby field: Stanolind Oil & Gas Co. No. 23 Spessard, 5,062 ft., 152 bbl., ⅛-in. choke. Seaboard Oil Co. No. 2-A LaPrelle, 4,361 ft., abandoned. Minnie Bock field: Texas Conservative Oil Co. No. 1-B Bock, perforated casing 3,809-19 ft., 119 bbl., ⅛-in. choke. Saxet field: Sinclair Prairie Oil Co. No. 6 Isensee, perforated casing 4,726-36 ft., 184 bbl., ⅛-in. choke.

San Patricio County

East White Point field: Plymouth Oil Co. and others No. 1 Solar-Countiss, perforated casing 5,649-73 ft., 136 bbl., 7/64-in. choke. Republic Natural Gas Co. No. 21 Rachal Estate, 5,642 ft., 102 bbl., 7/64-in. choke. Sun Oil Co. No. 1 Kirk, perforated casing 5,604-12 ft., 102 bbl., 7/64-in. choke.

Starr County

South Ricaby field: W. W. Zimmerman No. 4 Wood, 1,803 ft., abandoned.

Webb County

North Killam field: V. G. Schimmel No. 4 Laurel, perforated casing 2,021-21½ ft., 75 bbl., pumping. V. G. Schimmel No. 5 Laurel, abandoned location.

Zapata County

Comitas field: Nordan & Morris No. 14-C Haynes, sand 1,165-80 ft., 54 bbl., pumping. Escobas field: Nash & McKay No. 16 Garza, 1,249 ft., 56 bbl., pumping. Mirando Valley field: Buffalo Oil Co. No. 9-C Hinnant, sand 1,975-89 ft., 98 bbl., ⅝-in. choke. Buffalo Oil Co. No. 11-C Hinnant, sand 1,977½-2,024 ft., 64 bbl., 16 hours, jetting.

Kansas Fields

(Continued from Page 59)

pumped 223 bbl. of oil in 8 hours, with an initial potential of 671 bbl. per day.

Texon and Simpson Drilling Co. No. 1 Nelson, NE NE SE Section 14-20-16w, Pawnee County, had Arbuckle lime at 3,774-3,806 ft., total depth, and flowed 30 bbl. the first 3 hours; later flowed 118 bbl. in 8 hours, and made potential of 354 bbl. daily.

Skelly Oil Co. No. 1-F Miles, C NW NW Section 20-27-10w, Kingman County, was dry and abandoned at total depth of 4,320 ft.

Kansas First Reports

Rex & Morris No. 4-A De Moss, SW SE SW Section 5-28-7, Butler County, drilling at 1,035 ft. Continental Oil Co. No. 1 Gray, NW NW SW Section 19-18-7w, Rice County, building rotary rig. C. H. Weaver and others No. 1 Strong, SE NE NE Section 4-18-8w, rig. Continental Oil Co. No. 4 Siemson, SE NW NW Section 18-18-7w, rotary rig. Skelly Oil Co. No. 1 Beinstrof, C S½ SE SE Section 22-19-10w, Rice County wildcat, was building rotary rig. J. L. Henderson No. 1 Clover, C SE NE Section 8-31-7, Cowley County, was underreaming 8-in. at 1,555 ft. Gerald Smith and others No. 3 Wilson, C E½ SW NW Section 20-33-6, location.

Stanolind Oil & Gas Co. No. 6 Spangenberg, C N½ NE NW Section 29-22-11w, Stafford County, was a location. Continental Oil Co. No. 1 Keller, SE SE SE Section 15-24-13, wildcat, location.

Coralena Oil Co. No. 14 Deiner, SE NW NE Section 30-15-14w, Russell County, cementing casing at 238 ft.

Ace Oil Co. No 2 Warren, SW NE NE Section 21-25-1, Sedgwick County, digging cellar.

Stanolind Oil & Gas Co. and others No. 2 Belt, NW NW SW Section 13-20-16w, Pawnee County, location. Texon and Simpson Drilling Co. No. 2 Dirks, SE SE SE Section 14-20-16w, rigging up rotary.

James Enright and others No. 1-A Schwab, SE SW SE Section 9-24-10, Greenwood County wildcat, spudded and shut down.

Skelly Oil Co. No. 1 Royse, C SW Section 9-28-11w, Pratt County wildcat, location.

Sackrider and others No. 1 Allen, SE NE SE Section 13-21-15, Coffey County wildcat, was drilling at 375 ft.

A. G. Blaumer No. 1 Jewett, SE SE NW Section 15-14-22, Johnson County, was drilling at 226 ft.

W. C. McBride No. 1 Heintzleman, SE SE NE Section 30-21-1w, McPherson County, was rigging up rotary.

Magnolia Petroleum Co. No. 6 Mueller, NE NE NE Section 1-18-11w, Barton County, was rigging up.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Hogan Pet., No. 1-A Zabala, Casmalia, Santa Barbara	33- 9-34	2,440	sd. sh. drlg.
Sun-Bell Drlg. Co., No. 1 Smith, Lompoc, Santa Barb.	29- 8-34	122	sd. sh. drlg.
Arnold, E. C., No. 2 Careaga, Los Alamos, Santa Barb.	8- 8-33	6,838	cmtd. fish
Field, O. C., No. 1 White, Cat Canyon, Santa Barbara	21- 9-33	6,450	br. sh. drlg.
General Pet., No. 4 More, Goleta, Santa Barbara	15- 4-28	4,757	redrlg. 3,770
Trans-Oceanic Oil, No. 3 Midvani, Mesa, Santa Barb.	28- 4-27	1,598	cmtd. 1,527
St. Louis Oil, No. 1 Williamson, Sespe, Ventura	1- 4-20	1,994	will deepen
Section 20 Oil, No. 21, Sespe, Ventura	20- 5-19	2,941	idle
English, J. A., No. 1 Lankershim, Hopper Can., Ven.	13- 4-19	2,502	pump. 120 b.d.
Galveston Oil Co., No. 1 Basola, Bardsdale, Ventura	5- 3-19	3,139	reaming
Texas Co., No. 137 Shiells, Shiells Canyon, Ventura	4- 3-19	3,272	redrlg. 1,970
El Rancho Oil, No. 3 Elkins, Shiells Canyon, Ventura	9- 3-19	3,731	reaming
Continental Oil, No. 11 Grubb, San Miguelito, Ventura	24- 3-24	6,370	hd. sd. drlg.
C. C. M. Oil, No. 7-A Hobson, Padre Canyon, Ventura	15- 3-24	5,870	rig to pump
C. C. M. Oil, No. 27-B Hobson, Rincon, Ventura	16- 3-24	4,917	swabbing
Rincon Dev. Co., No. 82-4 Shudde, Rincon, Ventura	Tideland	2,078	cleaning out
Tide Water A. O., No. 34 V.L.W., Ventura Ave., Ven.	24- 3-23	7,700	flow 1,100 b.d.
Tide Water A. O., No. 40 V.L.W., Ventura Ave., Ven.	25- 3-23	10,769	O.S. drlg.
Tide Water A. O., No. 14 McGonigle, Ven. Ave., Ven.	23- 3-23	9,790	hd. sh. drlg.
Tide Water A. O., No. 15 McGonigle, Ven. Ave., Ven.	23- 3-23	2,187	sd. sh. drlg.
Tide Water A. O., No. 84 Lloyd, Ventura Ave., Ven.	27- 3-23	6,596	sd. sh. drlg.
Tide Water A. O., No. 123 Lloyd, Ventura Ave., Ven.	23- 3-23	8,635	P.B. 8,430
Tide Water A. O., No. 124 Lloyd, Ventura Ave., Ven.	23- 3-23	9,370	hd. sh. drlg.
Tide Water A. O., No. 8 Hartman, Ventura Ave. Ven.	22- 3-23	8,650	cleaning out
Shell Oil, No. 99 Taylor, Ventura Ave., Ventura	29- 3-23	7,350	flow 2,011 b.d.
Shell Oil, No. 100 Taylor, Ventura Ave., Ventura	29- 3-23	2,986	sd. sh. drlg.
Shell Oil, No. 34 Edison, Ventura Ave., Ventura	28- 3-23	2,296	sd. sh. drlg.
Brit. Amer. Pet., No. 8 Hartman, Ventura Ave., Ven.	22- 3-23	2,080	sd. sh. drlg.
Emigrant Oil, No. 1 Den, Devil's Den, Kern	24-25-18	4,278	swabbing
Belridge Oil, No. 35-38, North Belridge, Kern	35-27-20	8,005	sd. sh. drlg.
Belridge Oil, No. 28-17, North Belridge, Kern	28-27-20	5,492	sd. sh. drlg.
Belridge Oil, No. 26-25, North Belridge, Kern	26-27-20	8,500	redrlg. 8,094
Tide Water A. O., No. 21, North Belridge, Kern	21-27-20	7,270	sd. sh. drlg.
Richfield Oil, No. 3 Belridge, North Belridge, Kern	22-27-20	8,300	br. sh. drlg.
Tide Water A. O., No. 10-B Williamson, L. Hills, Kern	11-26-20	1,395	pump 10 b.d.
Calif. Expl., No. 2 Occidental, Lost Hills, Kern	24-26-20	5,625	will deepen
Standard Oil, No. 2-3 Tulare Farms, Delano, Kern	35-24-23	1,984	sd. sh. drlg.
Standard Oil, No. 2-2 Tulare Farms, Delano, Kern	34-24-23	2,440	sd. sh. drlg.
Standard Oil, No. 2-4 Tulare Farms, Delano, Kern	34-24-23	2,176	sd. sh. drlg.
Crusaders Oil, No. 1 Quinn, Richgrove, Kern	9-25-27	1,475	sd. sh. drlg.
Dilamar Oil, No. 3 Quinn, Jasmin, Kern	15-25-27	2,902	test W.S.O.
Sieman, Fred, No. 2 Extension, Edison, Kern	6-30-29	4,170	C.P. 3,910
Grizzly Bear Oil, No. 3 Kelley, Round Mtn., Kern	6-28-29	1,709	O.S. drlg.
Crestmont Oil, No. 6 Staley, Round Mountain, Kern	8-28-29	1,575	O.S. drlg.
Mayes, A. S., No. 1 Coffee, Round Mountain, Kern	6-28-29	1,287	sd. sh. drlg.
Brown & Cameron, No. 1 Brown, Kern River, Kern	27-28-28	450	idle
D. B. K., No. 5 Kern, Kern River, Kern	34-28-28	386	P.B. 345
Grogg & Fisher, No. 1 Kern, Kern River, Kern	27-28-28	438	sd. sh. drlg.
Wright & Eyer, No. 1 Dome, Mount Poso, Kern	28-26-28	1,514	pump 10 b.d.
Trico O. & G., No. 2 Villard, Mount Poso, Kern	17-26-28	1,763	gr. sd.; abd.
Texas Co., No. 2 Jewett, Arvin, Kern	16-31-29	3,492	sd. sh. drlg.
Standard Oil, No. 2 Jewett, Arvin, Kern	16-31-29	6,300	P.B. 6,160
Standard Oil, No. 3 Jewett, Arvin, Kern	16-31-29	163	sd. sh. drlg.
Universal Consd. Oil, No. 2 Derby, Arvin, Kern	15-31-29	5,560	sd. sh. drlg.
Western Gulf Oil, No. 42-B, K.C.L., Fruitvale, Kern	14-29-27	2,945	recmtd. 2,922
Meridian Pet., No. 1 Deep Test, Fruitvale, Kern	23-29-27	2,791	sd. sh. drlg.
Getty, George F., Inc., No. 1 Jannsen, Wasco, Kern	7-27-24	9,371	sd. sh. drlg.
Sal. Ex., No. 1 Dougherty-Salisbury, But'willow, Kern	7-29-24	12,989	P.B. 12,740
General Pet., No. 2 Van Ness, Rio Bravo, Kern	2-29-25	11,514	sd. sh. drlg.
Union Oil, No. 10-34, K.C.L., Rio Bravo, Kern	34-28-25	6,586	sd. sh. drlg.
Superior Oil, No. 1 Fink, Rio Bravo, Kern	27-28-25	10,007	sd. sh. drlg.
Standard Oil, No. 1 Ross, Greeley, Kern	20-29-26	8,570	sd. sh. drlg.
Standard Oil, No. 11-18, K.C.L., Greeley, Kern	18-29-26	9,750	hd. sh. drlg.
Standard Oil, No. 11-19, K.C.L., Greeley, Kern	18-29-26	8,880	gr. sd. drlg.
Standard Oil, No. 12-6, K.C.L., Greeley, Kern	30-29-26	11,942	O.S. drlg.
Continental Oil, No. 2-D, K.C.L., Bellevue, Kern	14-30-26	10,188	hd. sh. drlg.
Shell Oil, No. 78-24-A, K.C.L., Ten Section, Kern	24-30-25	8,185	flow 1,573 b.d.
Shell Oil, No. 23-28-B, K.C.L., Canal, Kern	28-30-26	3,880	sd. sh. drlg.
Shell Oil, No. 25-14-A, K.C.L., Canal, Kern	14-30-25	8,198	sd. sh. drlg.
Ohio Oil, No. 13-E, K.C.L., Canal, Kern	13-30-25	3,684	sd. sh. drlg.
Richfield Oil, No. 12-33-A, K.C.L., Tupman, Kern	33-30-25	7,990	sd. sh. drlg.
Standard Oil, No. 21-1, K.C.L., Tupman, Kern	19-30-25	9,280	hd. sh. drlg.
Richfield Oil, No. 14-3-B, K.C.L., Coles Levee, Kern	3-31-25	8,930	hd. sh. drlg.
Standard Oil, No. 20-1, K.C.L., Coles Levee, Kern	9-31-25	9,216	completing
Ohio Oil, No. 3-F, K.C.L., Coles Levee, Kern	11-31-25	7,570	hd. sh. drlg.
Union Oil, No. 2-11, K.C.L., Coles Levee, Kern	11-31-25	6,880	sd. sh. drlg.
Standard Oil, No. 216 Tupman, Elk Hills, Kern	36-30-24	2,975	bailing
Standard Oil, No. 218-15-D fee, Midway-Sunset, Kern	15-32-24	3,502	cleaning out
Standard Oil, No. 21-C fee, Midway-Sunset, Kern	1-32-23	2,892	pump 20 b.d.
Vista Grande Oil, No. 1 Schultz, Midway-Sunset, Kern	36-32-23	3,630	cleaning out
Quality Oil, No. 6 W.P., Midway-Sunset, Kern	27-32-23	432	sd. sh. drlg.
Van Fleet & Durkee, No. 3 Hoyst, Mid.-Sunset, Kern	36-32-23	2,510	P.B. 2,226
General Pet., No. 1 B.V.A., Midway-Sunset, Kern	1-32-24	5,862	sd. sh. drlg.
National Oil, No. 33 Sunset, Midway-Sunset, Kern	35-32-23	981	sd. sh. drlg.
Par Oil & Gas, No. 1 Hager, Midway-Sunset, Kern	16-31-22	2,802	sd. sh. drlg.
W. Gulf Oil, No. 1 Panhandle, Buena Vista Lake, Kern	3-32-26	9,097	sd. sh. drlg.
Gates, F. E., No. 2 Laymance, McKittrick, Kern	20-30-22	1,474	pump water
Richfield Oil, No. 1 K.C.L., Wheeler Ridge, Kern	28-11-20	11,004	cmtd. 10,815
Continental Oil, No. 1-F, K.C.L., San Emidio, Kern	5-10-21	5,697	sd. sh. drlg.
Bannow, L. E., No. 1 Irwin, San Emidio, Kern	15-10-23	1,887	fish D.P.
Shell Oil, No. 52-2-13-A, K.C.L., San Emidio, Kern	13-11-22	1,274	sd. sh. drlg.
Petrol Corp., No. 33-5 Reserve, Tejon, Kern	33-11-19	8,946	redrlg. 7,480
Cent. Valley Oil., No. 1 Community, El Prado, Fresno	1-12-20	1,218	dry; abd.
Shell Oil, No. 48-30 Port Costa, Turk, Fresno	30-17-16	9,250	gr. sd. drlg.
Superior Oil, No. 1 S.P.L., Turk, Fresno	15-18-16	7,198	sd. sh. drlg.
Texas Co., No. 1 Loescher, Burrell, Fresno	12-17-16	7,480	gr. sd. drlg.
Gatos Creek Oil, No. 1 Cable, Gatos Creek, Fresno	19-19-13	102	sd. sh. drlg.
Diamond, H. P., No. 7 Hill, West Coalinga, Fresno	35-20-14	170	idle
Nagayami & Haranaga, No. 2 Hill, W. Coal., Fresno	14-20-14	805	idle
Rylatt, Harry, No. 3 Kipling, West Coalinga, Fresno	26-20-14	1,928	idle
Bandini Pet., No. 48-18-Webb, NE. Coalinga, Fresno	18-19-16	7,080	hd. sh. drlg.
Amerada Pet., No. 26-17 S.P.L., NE. Coalinga, Fresno	17-19-16	8,000	hd. sh. drlg.
Lytle, R. S., agent, No. 48-7-F, SE. Coalinga, Fresno	7-20-16	7,050	hd. sh. drlg.
Lytle, R. S., agent, No. 75-7-F, SE. Coalinga, Fresno	7-20-16	7,654	hd. sh. drlg.
Lytle, R. S., agent, No. 5-18-F, SE. Coalinga, Fresno	18-20-16	7,003	sd. sh. drlg.
Texas Co., No. 1 Exeter fee, SE. Coalinga, Fresno	6-20-16	8,165	O.S. drlg.
Texas Co., No. 2 Exeter fee, SE. Coalinga, Fresno	6-20-16	6,740	sd. sh. drlg.
Standard Oil, No. 84-13-C, SE. Coalinga, Fresno	13-20-15	6,472	sd. sh. drlg.
Superior Oil, No. 2 Hight, SE. Coalinga, Fresno	8-20-16	6,097	sd. sh. drlg.
Superior Oil, No. 1 P.V.F., SE. Coalinga, Fresno	22-20-15	8,358	reaming
Holly Dev. Co., No. 82-12-C, SE. Coalinga, Fresno	12-20-15	5,971	hd. sh. drlg.
K. N. D. A., No. 4-18-Q, Kettleman North, Kings	18-22-18	8,295	recmtd. 8,293
K. N. D. A., No. 2-20-Q, Kettleman North, Kings	20-22-18	7,460	sd. sh. drlg.
K. N. D. A., No. 4-22-Q, Kettleman North, Kings	22-22-18	6,060	br. sh. drlg.
K. N. D. A., No. 58-22-Q, Kettleman North, Kings	22-22-18	7,605	flow 1,432 b.d.
K. N. D. A., No. 4-26-Q, Kettleman North, Kings	26-22-18	7,740	O.S. drlg.
Standard Oil, No. 2-19-J, Kettleman North, Fresno	19-21-17	6,504	will deepen
Standard Oil, No. 27-7-Q, Kettleman North, Kings	7-22-18	1,195	sd. sh. drlg.
Standard Oil, No. 87-7-Q, Kettleman North, Kings	7-22-18	7,670	hd. sh. drlg.
Standard Oil, No. 52-17-Q, Kettleman North, Kings	17-22-18	8,480	sd. sh. drlg.
Standard Oil, No. 63-17-Q, Kettleman North, Kings	17-22-18	4,697	sd. sh. drlg.
Standard Oil, No. 85-17-Q, Kettleman North, Kings	17-22-18	6,790	br. sh. drlg.
Standard Oil, No. 87-17-Q, Kettleman North, Kings	17-22-18	6,482	sd. sh. drlg.
Standard Oil, No. 63-21-Q, Kettleman North, Kings	21-22-18	5,691	sd. sh. drlg.
Standard Oil, No. 72-21-Q, Kettleman North, Kings	21-22-18	8,340	sd. sh. drlg.
Standard Oil, No. 83-21-Q, Kettleman North, Kings	21-22-18	7,785	cleaning out
Epco, Inc., No. 1 Cuyama, Creston, San Luis Obispo	27-27-13	5,680	idle
Newton, S. M., No. 1 Stafford, Panorama, S. L. Obispo	18-21-21	3,170	sd. sh. drlg.
Calif. Expl., No. 1 Irons, Cuyama Val., S. L. Obispo	19-10-24	2,340	sd. sh. drlg.
Standard Oil, No. 1 Calpac, Rio Vista, Solana	15- 5-2	5,290	sd. sh. drlg.
Buttes Oilfields, Inc., No. 5 Butte, S. Buttes, Sutter	1-15-1	4,630	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
D. & B. Oil, No. 5 Lomita, Torrance, Los Angeles	23- 4-14	4,761	sd. sh. drlg.
Elliott, D. W., No. 8 Kettler, Torrance, Los Angeles	23- 4-14	5,186	P.B. 3,905
O'Donnell, J. E., No. 72 Lomita, Torrance, Los Ang.	30- 4-14	5,246	O.S. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd. cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill stem test.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., owell drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng.,) running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrk. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing)
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C., or W.O.C.S., waiting on cement to set.
W.O.O., waiting for orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Lebow-McNee Oil, No. 3-B Kettler, Torrance, L. Ang.	23-	4-14	5,158	O.S. drlg.
C. C. M. Oil, No. 12 Kettler, Torrance, Los Angeles..	23-	4-14	5,119	gr. sd. drlg.
Rolling Hills Pet., No. 1 Weston, Palos Verdes, L. A.	27-	4-14	5,530	deepening
Union Oil, No. 69 Callender, Dominguez, Los Angeles	32-	3-13	3,181	sd. sh. drlg.
Union Oil, No. 7 Callender, Dominguez, Los Angeles	32-	3-13	2,972	sd. sh. drlg.
Union Oil Co., No. 32 Rosecrans, Rosecrans, Los Ang.	19-	3-13	7,610	O.S. drlg.
Univ. Consd. Oil, No. 17 Trust, Rosecrans, L. Ang.	18-	3-13	7,623	O.S. drlg.
Royalty Service, No. 4 Gordon, Rosecrans, Los Ang.	19-	3-13	7,900	fish D.P.
Bankline Oil, No. 1 Kirby, Rosecrans, Los Angeles..	19-	3-13	7,723	rig to pump
King & Weymouth, No. 2 Averill, Rosecrans, Los Ang.	20-	3-13	4,862	sd. sh. drlg.
Averill, G. G., No. 1 Howard, Rosecrans, Los Ang...	20-	3-13	7,645	swab. water
So. Cal. Pet., No. 1 Slabaugh, Rosecrans, Los Ang.	19-	3-13	2,171	fish D.P.
Trans-Western Oil, No. 1 Beloil, Potrero, Los Ang...	28-	2-14	5,450	redrlg. 2,287
Empire Oil, No. 1 Samarkand, Playa Del Rey, L. A.	34-	2-15	6,413	pump 90 b.d.
Tide Water A. O., No. 11 Porter, Aliso Canyon, L. A.	27-	3-16	3,742	hd. sd. drlg.
Union Oil, No. 1-27 Orcutt, Aliso Canyon, Los Ang.	27-	3-16	5,980	dry; abd.
O'Donnell, J. E., No. 1 Hammond, Newhall, Los Ang.	8-	3-16	5,195	sd. sh. drlg.
Redwood Oil, No. 1 Mitchell, Mint Canyon, Los Ang.	22-	4-15	109	sd. sh. drlg.
Lang, E. M., No. 1 Rupy, Castaic, Los Angeles	7-	5-16	298	sd. sh. drlg.
Barnsdall Oil, No. 6 R.S.F., Newhall, Los Angeles ...	27-	4-14	4,365	sd. sh. drlg.
Barnsdall Oil, No. 7 R.S.F., Newhall, Los Angeles ..	27-	4-17	4,784	sd. sh. drlg.
General Pet., No. 40 Ford, Wilmington, Los Angeles	4-	5-13	2,587	sd. sh. drlg.
General Pet., No. 5 Blinn, Wilmington, Los Angeles	4-	5-13	3,250	sd. sh. drlg.
General Pet., No. 7 S.P., Wilmington, Los Angeles ..	2-	5-13	4,080	O.S. drlg.
Gremac Oil, No. 1 Harbor, Wilmington, Los Angeles	4-	5-13	3,678	flow 160 b.d.
Long Beach Dev., No. 7-X Harbor, Wilmington, L. A.	3-	5-13	2,355	sd. sh. drlg.
Long Beach Dev., No. 8-X Harbor, Wilmington, L. A.	2-	5-13	2,331	sd. sh. drlg.
Long Beach Dev., No. 9-X Harbor, Wilmington, L. A.	2-	5-13	2,440	sd. sh. drlg.
Long Beach Dev., No. 10-X Harbor, Wilmington, L. A.	2-	5-13	2,330	sd. sh. drlg.
Long Beach Dev., No. 5-Y Harbor, Wilmington, L. A.	2-	5-13	3,989	tested wet
Long Beach Dev., No. 6-Y Harbor, Wilmington, L. A.	2-	5-13	3,975	flow 250 b.d.
Long Beach Dev., No. 9-Y Harbor, Wilmington, L. A.	2-	5-13	2,311	sd. sh. drlg.
Long Beach Dev., No. 1-Z Harbor, Wilmington, L. A.	2-	5-13	2,286	sd. sh. drlg.
Long Beach Dev., No. 2-Z Harbor, Wilmington, L. A.	2-	5-13	928	sd. sh. drlg.
Oakes & Combs, No. 5-D Harbor, Wilmington, L. A.	3-	5-13	3,925	redrlg. 3,154
Pet. Midway, No. 1-G Kupfer, Wilmington, L. Ang.	35-	4-13	3,468	flow 145 b.d.
Ring Oil, No. 3 Harbor, Wilmington, Los Angeles ..	35-	4-13	3,609	P.B. 2,970
Signal O. & G., No. 3-P.D., Wilmington, Los Angeles	3-	5-13	4,210	O.S. drlg.
Signal O. & G., No. 4-P.D., Wilmington, Los Angeles	3-	5-13	3,950	sd. sh. drlg.
Signal O. & G., No. 2-S.P., Wilmington, Los Angeles	3-	5-13	2,947	sd. sh. drlg.
Sunray Oil, No. 842-2 Gilmore, Wilmington, L. Ang.	33-	4-13	5,775	redrlg. 4,853
Union Pacific, No. 103, Wilmington, Los Angeles ..	3-	5-13	2,590	sd. sh. drlg.
Union Pacific, No. 110, Wilmington, Los Angeles ..	34-	4-13	3,067	flow 340 b.d.
Union Pacific, No. 16-E, Wilmington, Los Angeles ..	3-	5-13	3,995	P.B. 3,975
Wilton Oil, No. 8 Harbor, Wilmington, Los Angeles	3-	5-13	2,955	O.S. drlg.
Ridge Oil, No. 1 Club, Montebello, Los Angeles	3-	2-12	7,770	gr. sd. drlg.
Kern Oil, No. 25 Monterey, Montebello, Los Angeles	2-	2-12	7,336	sd. sh. drlg.
Kern Oil, No. 32 Monterey, Montebello, Los Angeles	2-	2-12	2,157	sd. sh. drlg.
Kern Oil, No. 2 Eggleston, Montebello, Los Angeles	2-	2-12	7,161	perforating
Kern Oil, No. 2 Taylor, Montebello, Los Angeles ...	2-	2-12	7,135	flow 350 b.d.
Standard Oil, No. 4 Harvey, Montebello, Los Angeles	2-	2-12	6,998	C.P. 6,600
Standard Oil, No. 2 Braun, Montebello, Los Angeles	2-	2-12	7,653	flow 1,000 b.d.
Standard Oil, No. 3 Braun, Montebello, Los Angeles	2-	2-12	7,625	completing
Standard Oil, No. 6 Braun, Montebello, Los Angeles	2-	2-12	2,377	sd. sh. drlg.
Standard Oil, No. 6 Whitehead, Montebello, Los Ang.	3-	2-12	7,655	flow 1,188 b.d.
Standard Oil, No. 7 Whitehead, Montebello, Los Ang.	3-	2-12	4,184	sd. sh. drlg.
Standard Oil, No. 1 Kaufman, Montebello, Los Ang.	2-	2-12	6,465	rigging up
Union Oil, No. 4 Wilcox, Montebello, Los Angeles ..	2-	2-12	6,960	sd. sh. drlg.
Union Oil, No. 31 La Merced, Montebello, Los Ang.	1-	2-12	3,694	sd. sh. drlg.
Union Oil, No. 32 La Merced, Montebello, Los Ang.	2-	2-12	7,424	O.S. drlg.
Union Oil, No. 2 Howard & Smith, Montebello, L. A.	2-	2-12	7,602	flow 300 b.d.
Union Oil, No. 5 Howard & Smith, Montebello, L. A.	2-	2-12	6,411	redrlg. 5,070
Union Oil, No. 2 Calkins, Montebello, Los Angeles ..	2-	2-12	7,409	sd. sh. drlg.
Union Oil, No. 5 Paul Howard, Montebello, Los Ang.	2-	2-12	7,370	recmtd. 7,370
Bev. Mont. Oil, No. 1 Corbett, Montebello, Los Ang.	11-	2-12	7,040	sd. sh. drlg.
Bev. Mont. Oil, No. 2 Meyer, Montebello, Los Ang.	2-	2-12	3,672	sd. sh. drlg.
B-A Oil Prod., No. 1 Oswald, Montebello, Los Angeles	2-	2-12	3,997	sd. sh. drlg.
McVicar & Rood, No. 2 Manz, Montebello, Los Angeles	2-	2-12	7,600	O.S. drlg.
Pongratz Pet., No. 1 Newmark, Montebello, Los Ang.	3-	2-12	7,641	fish D.P.
Pongratz Pet., No. 1 Martin, Montebello, Los Angeles	2-	2-12	6,700	may deepen
Fullerton Oil, No. 1 Trustee, Montebello, Los Angeles	2-	2-12	2,994	sd. sh. drlg.
McKeon, John, No. 1 Cowan, Montebello, Los Ang.	1-	2-12	4,698	sd. sh. drlg.
Star Pet., No. 1 Banks, Montebello, Los Angeles ...	2-	2-12	5,798	sd. sh. drlg.
Caminol Co., No. 1-15 Cowan, Montebello, Los Ang.	2-	2-12	3,575	redrlg. 3,398
Wood-Callahan Oil, No. 1 Bartlett, Montebello, L. A.	2-	2-12	4,161	sd. sh. drlg.
Bush Oil, No. 1 Alauzet, Montebello, Los Angeles ..	3-	2-12	5,786	sd. sh. drlg.
Herley-Kelly, Inc., No. 2 Masser, Montebello, L. A. ..	2-	2-12	7,625	flow 1,100 b.d.
Texas Co., No. 18 Baldwin, East Montebello, L. A.	6-	2-11	7,758	sd. sh. drlg.
Colorado Oil, No. 19 Granger, Whittier, Los Angeles	22-	2-11	4,870	sd. sh. drlg.
Taylor Prod., No. 1 Gregg, Citrus Grove, Los Ang...	17-	2-11	5,504	sd. sh. drlg.
Kelso, F. W., No. 1 Brea, Puente Hills, Los Angeles	13-	2-10	1,974	sd. sh. drlg.
Parry and associates, No. 1 Pool, Long Beach, L. A.	29-	4-12	7,820	circulating
Texas Co., No. 1 Harlow Kent., Long Beach, Los Ang.	19-	4-12	4,131	sd. sh. drlg.
Sepulveda Oil, No. 1 Grady, San Pedro, Los Angeles	23-	5-14	614	rigging up
Union Oil, No. 18 Y.L.G., Richfield, Los Angeles	34-	3-9	2,997	sd. sh. drlg.
Traders Oil, No. 1 Wagner, Richfield, Los Angeles ..	22-	3-9	4,140	sd. sh. drlg.
Tide Water A. O., No. 54 Anaheim, E. Coyote, Orange	24-	3-10	3,660	cmtd. 3,337
Severns Drlg., No. 4 McNally, West Coyote, Orange	24-	3-11	4,997	cmtd. fish
SW. Expl., No. 16 State, Huntington Beach, Orange	10-	6-11	4,529	will redrl.
SW. Expl., No. 17 State, Huntington Beach, Orange	10-	6-11	2,198	idle
SW. Expl., No. 19 State, Huntington Beach, Orange	10-	6-11	5,140	pump 715 b.d.
SW. Expl., No. 2 State, Huntington Beach, Orange	10-	6-11	2,090	sd. sh. drlg.
Duchess Oil, o. 4 Farnsworth, Hunt. Beach, Orange	34-	5-11	3,600	rigged up
Petremont Oil, No. 1 Morris, Hunt. Beach, Orange	36-	5-11	3,650	sd. sh. drlg.
Carbon Can. Oil, No. 1 Schuch, Carbon Can., San Ber.	36-	2-9	256	sd. sh. drlg.
Hokum Oil, No. 1 Hokum, Carbon Can., San Ber.	31-	2-8	1,576	sd. sh. drlg.

OKLAHOMA

Week Ending July 1

NORTHERN OKLAHOMA

Atoka County

Giblett No. 1 Rich, SE SE SW Sec. 2-1-12. S.D. 728 ft.

Caddo County

Sinclair Prairie Oil Co. No. 1 German, SW NW NW Sec. 1-16-13w. Drlg. 2,520 ft.

Comanche County

Mid Night Oil No. 1 Howe, NW NW NE Sec. 30-2-13w. O.W.D.D.; O.T.D. 703 ft.; T.D. 894 ft.; fsg.

Cleveland County

Hall & Briscoe No. 1 Mantooth, NW NW NW Sec. 24-6-1e. Drlg. 4,689 ft.

Nels Burton No. 1 Boggs, NE NE SE Sec. 16-9-2w. 2nd Wlx. 7,585 ft.; T.D. 7,646 ft.; P.B. 7,473 ft.; drld. plug; N. S.; acdz.

Nels-Burrton No. 1 Hirsch, NW NW NE Sec. 17-9-2w. O.W.P.B.; O.T.D. 7,692 ft.; T.D. 7,695 ft.

Ellis County

Enterprize Drlg. Co. No. 1 Wahl, SE NW NW Sec. 1-19-25w. Sd. 660-65 ft.; T.D. 730 ft.; S.D.O.

Garfield County

Gulf Oil Corp. No. 1 Thomas, C W½ SW SW Sec. 21-24-4w. Drlg. 4,625 ft.

Kerlyn Oil Co. No. 1 Hein, NW NW NW Sec. 36-22-4w. T.D. 5,042 ft.; S. D.O.

Grady County

J. B. Nichlos No. 1 Bushnell, NW NE SE Sec. 7-5-8w. Drlg. 2,425 ft.

Grant County

Carter Oil No. 1 Staggers, C W½ SE NW Sec. 4-25-3w. Circ. at 5,528 ft.

Smythe & O'Mara No. 1 State, C SE SW Sec. 16-25-4w. Sdy. dolo. 5,945 ft.; drlg. 5,971 ft.

Harmon County

Russo Drlg. No. 1 Abernathey, C SW SW Sec. 12-2-26w (3,000-ft. test). T.D. 2,802 ft.; shot; S. 2 B.O. and S.D.O.

Hughes County

Carter Oil No. 1 Hamilton, C W½ NE SW Sec. 33-4-9. T.D. 4,235 ft., S.D.

Continental Oil No. 1 Hudson, SE SE SE Sec. 8-4-9. Wdfrd. 5,525 ft.; Vla. 5,818 ft.; cg. 5,867 ft.

Harper County

Sinclair Prairie No. 1 George, SW SW SW Sec. 5-27-23w. Drlg. 5,810 ft.

Jackson County

English & Morgan No. 1 Lee, NW NW SE Sec. 36-2-19w. S.G. 1,360-63 ft.; T.D. 1,603 ft.; P.B. 1,243 ft.; S.D.O.

Jefferson County

H. M. Weir No. 1 Carmichael, NE NE SW Sec. 23-7s-7w. Drlg. 3,525 ft.

Kay County

Tide Water Asso. No. 1 Kelle, SE SE NE Sec. 27-28-1w. Drlg. 3,554 ft.

Roy Starr No. 1 State, NE NE SW Sec. 13-29-2w. Drlg. 3,146 ft.

Kingfisher County

Ace Gutowsky No. 1 Lankford, NE NE SE Sec. 34-17-6w. Miss. 7,014 ft.; Woodford 7,531 ft.; Msnr. 7,562 ft.; Wlx. 8,105 ft.; 2nd Wlx. 8,275 ft.; T.D. 8,330 ft.; S.D.O.

Kiowa County

C. M. Beckett No. 1 Standerfer, NE NE NE Sec. 25-7-18w. S.D.O. 1,200 ft.

Bollen-Dillard & Roberts No. 1 Holcomb, NE NE SW Sec. 25-7-19w. Drlg. 258 ft.

C. J. Hagerling No. 1 Kimray, SW SW NW Sec. 36-5-18w. T.D. 997 ft.; S.G. 992-96 ft.

Russell S. Tarr No. 1 Kelsay, SW SW NW Sec. 20-7-17w. Pay 1,050-51½ ft.; F. 70 B.O.P.H. by hds.; est. 1,500 to 2,000 B.O.P.D; S.I.

Lincoln County

Black Gold No. 1 Locquchment, NE NE NE Sec. 28-14-6. T.D. 3,175 ft.; C.O.

Cooper Drlg. Co. No. 1 Blaney, SW SW NW Sec. 13-14-5. Prue 3,258 ft.; Bart. 3,748 ft.; T.D. 3,859 ft.

Mason & Nicholls No. 1 Lindsay, SW SE SE Sec. 26-12-3. Wdfd. 5,175 ft.; drlg. 5,504 ft.

W. A. Villines No. 1 Marshall, NW NE NE Sec. 28-15-4. T.D. 5,080 ft.; S.D.

Pawnee County

Ed Kelly No. 1 Hill, SW SW SE Sec. 1-21-5. T.D. 2,845 ft.; whipstock 2,840 ft.; drlg. by tools.

Pittsburgh County

Phillips Pet. Co. No. 1 Hubacker, C NW NE Sec. 11-7-15. 1st Wlx. 7,514-24 ft.; drlg. sd. 7,671 ft.

Pontotoc County

L. Walker No. 1 King, SW SE NW Sec. 5-4-7. T.D. 1,203 ft.; D.&A.

Pottawatomie County

Alma Oil Co. No. 1 Johnson, SW NW SW Sec. 19-8-5. 2nd Wlx. 4,025 ft.; T. D. 4,062 ft.; P.B. 3,019 ft.; perf. 2,890-2,900 ft. in Earlsboro; F. 200 B.O.P.D.

H. L. Berky No. 1 Dowell, SW NE NW Sec. 33-8-4. Vlo. 4,340 ft.; dolo. 4,445 ft.; Wlx. 4,595 ft.; T.D. 4,613 ft.; D. &A.

F. W. Cooper No. 1 Strawn, SE SE SW Sec. 32-8-5. T.D. 4,411 ft.; S.D.

I.T.I.O. No. 1 Lambert, C E½ NW NE Sec. 6-5-2. Vlo. 5,280 ft.; Wlx. 5,675 ft.; T.D. 5,716 ft.; D.&A.

Sequoyah County

Thompson Bros. No. 1 Ruby, NW NW NE Sec. 30-12-22. T.D. 1,510 ft.; S.D.

Seminole County

Culberson & Shepherd No. 1 Burton et al, SW NW SE Sec. 3-5-5. T.D. 2,668 ft.; F. 240 B.O. in 24 hrs.

Flynn et al No. 1 Work, NE SE SE Sec. 19-8-7. Wlx. 4,276-92 ft.; set pipe.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. Drlg. 12,881 ft.; sdy. L. 11,915-20 ft.

John Koberg No. 1-A Harms, C NW NE Sec. 6-10-16w. T.D. 6,000 ft.; tools moved out.

L. B. McWhirter No. 1 fee, NW SW SW Sec. 34-8-19w. T.D. 2,250 ft.; S.D.

SOUTHERN OKLAHOMA

Carter County

Pure Oil Co. No. 1 Noble, NE SE SE Sec. 35-3s-1e. T.D. 8,500 ft.; P.B. 6,530 ft.; tstd. wtr. at 6,319 ft.; set 7-in. 4,632 ft.; tstd. Hntn. 4,638-4,737 ft.; csg. perf. 11 times with 133 shots at 4,160-4,324½ ft.; swbd. 20 B.O.P.H. and 500,000 cu. ft. gas per day; believed to be prod. from upper portion of Wdfrd. sh. topped at 4,289 ft.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. Drlg. sh. 1,550 ft.

Marshall County

Hughes et al No. 1 Vittitto, C NE SE Sec. 11-5s-4e. O.W.D.D.; O.T.D. 7,100 ft.; T.D. 7,110 ft.; set plug 4,450 ft.; S. 51 B.F.P.R.

Tillman County

Oil Inv. No. 2 Hammell, NE NW NW Sec. 6-5s-15w. O.W.D.D.; O.T.D. 2,829 ft.; T.D. 3,353 ft.; S.D.

KANSAS

Week Ending July 1 (Descriptions are East unless marked otherwise)

Atchison County

Earl Wakefield et al No. 1 Natl. Life Ins., C NW NE Sec. 17-6-20. R.U.

Barton County

Armer and Vernon O. & G. Co. No. 1 Hoffman, NW NW SW Sec. 18-16-11w. Tpka. 2,625 ft.; Lans. 3,045 ft.; drlg. 3,135 ft.

B. B. & M. Drlg. Co. No. 1 Esfeld, NW NW SE Sec. 28-16-11w. Drlg. 2,720 ft.

Broswood Oil and Earl Wakefield No. 1 Rule, NW SW NE Sec. 2-16-13w. Lans. 3,103 ft.; T.D. 3,105 ft.; U.R.

J. A. Brouk et al No. 1 Pospishel, NE NE SE Sec. 20-17-15w. Tpka. 3,010 ft.; Arb. 3,548 ft.; T.D. 3,557 ft.; R.U.S.T

R. E. Day et al No. 1 Feltes, SE SE NE Sec. 14-16-12w. O.W.D.D. O.T.D. 1,875 ft.; S.D. 3,342 ft.

Butler County

Carey & Jennings No. 1 Kelly, C SW Sec. 20-27-4. T.D. 1,790 ft.; rng. csg.

Elbar Corp. No. 1 Martin, NE SE SE Sec. 34-26-7. S.S.O. 2,600-05 ft.; C.O. 2,686 ft.

G. S. Lucas and White Star Oil No. 1-A Lucas, NE NW NW Sec. 14-28-6. Fsg. 775 ft.

Comanche County

Kerr-Lynn et al No. 1 McMoran, C SE NW Sec. 25-34-16w. Drlg. 2,336 ft.

Cowley County

Hartman & Blair No. 1-A Brown, SE SE NW Sec. 33-30-4e. Arb. 3,279-80 ft.; T. D.; est. 18 B.O.

J. R. Lowell et al No. 1 Olsen, NE NE SE Sec. 13-35-7. M.I. mch.

Western Kans. O. & R. Co. No. 1 Gregory, SE SE NW Sec. 2-34-6. Rig.

Dickinson County

Franks et al No. 1 Huffman, NW NW SW Sec. 11-13-1. Hntn. 2,807 ft.; T.D. 2,816 ft.; U.R. 5-in.

Douglas County

Three Star Oil Co. No. 1 Griffith, C NW SE Sec. 4-14-8e. M.I.M.

Ellis County

Central Pet. No. 4 Hadley, NE NE SE Sec. 12-11-18w. Lans. 3,054 ft.; Arb. 3,353-58 ft., T.D.; 3,000 ft. O.I.H.; no test.

K. F. Nelson No. 1 Novak, NW NW NE Sec. 36-13-16w. Tpka. 2,821 ft.; S.O. 2,925 ft.; drlg below 3,015 ft.

Ellsworth County

I. W. Murfin No. 1 Loula, NW NW SE Sec. 28-16-10w. Tpka. 2,620 ft.; Lans. 2,970 ft.; gas 3,005-45 ft.; drlg. 3,190 ft.

I. W. Murfin No. 1 Zajic, C S½ SW NE Sec. 31-16-10w. B.R.

Geary County

Scheu & Tague No. 1 Aye, NW SW NW Sec. 10-12-8. T.D. 1,938 ft.; U.R.

Gray County

Champlin Ref. No. 1 Dirks, C NE SW Sec. 34-28-29w. Drlg. 5,250 ft.

Greenwood County

Austin Reed et al No. 1 Sowder, SE SE NW Sec. 31-25-13. T.D. 1,597 ft.; est. 20 B.O.P.D.

G. L. Sheedy No. 1 fee, C E½ NE NW Sec. 13-25-12. Drlg. 300 ft.

Harvey County

Western Kans. O. & R. Co. et al No. 1 Mooreshead, SW SW SW Sec. 24-23-1w. Drlg. 2,200 ft.

Haskell County

United Prod. No. 1 Illinois, NW NW SE Sec. 31-29-34w. Gas 2,614 ft.; T.D. 2,737 ft.; est. 27,200,000 cu. ft. gas.

Kingman County

Skelly Oil Co. No. 1 Miller, CSL N½ NE Sec. 31-27-10w. Cellar.

Kiowa County

Sinclair Prairie No. 1 Price, NW NW SW Sec. 22-28-20w. Miss. 4,910 ft.; drlg. 5,470 ft.

Marion County

Tide Water Asso. and Ward McGinnis No. 1 Junghanns, SE SE SE Sec. 23-18-5. Lans. 1,576 ft.; W.I.H.; S.D. 2,164 ft.

Miami County

Dave Judd No. 1 Waite, CNL SW SE Sec. 4-15-25. S.D. 732 ft.

Osage County

J. M. Edwards No. 1 Detrick (O.W.D.D.), C NW SE Sec. 21-14-15. O.T.D. 1,200 ft.; drlg. 1,640 ft.

Reno County

Herndon Drlg. Co. No. 1 Compton, CEL SE NW Sec. 31-25-10w. R.R.

Rice County

Bradley Oil No. 1 Ruhl, C E½ NE NW Sec. 24-19-10w. Drlg. 3,035 ft.

Bridgeport Mch. No. 1 Pierce, CSL N½ NE Sec. 29-20-7w. Miss. 3,305-07 ft., acd. but no ind.; drlg. 3,515 ft.

Carey et al No. 1 Link, SW NW SE Sec. 19-19-9w. Lans. 2,923 ft.; S.S.O. 3,004 ft.; R.U.S.T. 3,276 ft.

Central Pet. No. 1 Dippel, CNL NE SE Sec. 27-19-10w. T.D. 3,315 ft.; Arb. 3,292 ft.; P. 100 B.O. in 8 hrs.; comp.

Finston & Co. et al No. 1 Hathaway, CNL NW SW Sec. 27-19-10w. T.D. 3,043 ft.; F. 10 B.O.P.H.

Fred Jones No. 1 Habiger, NE NE SW Sec. 9-18-10w. Drlg. 2,835 ft.

Frank Hollow et al No. 1 Guldner, SE SE SE Sec. 5-18-9w. Drlg. 460 ft.

Lario O. & G. Co. No. 1 Link, SE SE SW Sec. 17-19-9w. Arb. 3,264-85 ft., T.D.; D.&A.

Lauck & Moncrief No. 1 Schoonover, SW SW SE Sec. 20-18-9w. Lans. 2,902 ft.; Arb. 3,271-3,304 ft., T.D.; D.&A.

Nelson Drlg. Co. No. 1 Hodge, NW NW NE Sec. 25-20-6w. Lans. 2,890 ft.; Miss. 3,301-03 ft.; T.D. 3,336 ft.; P. 147 B.O. in 8 hrs.

Phoenix Drlg. No. 1 Linville, SW SW SE Sec. 4-20-10w. Drlg. 880 ft.

E. J. Shaffer No. 1 Bauer, C W½ SW SW Sec. 23-21-7w. Drlg. 2,538 ft.

C. H. Weaver No. 1 James, NE NW SW Sec. 25-19-10w. R.R.

Rooks County

Broadview Oil No. 1 Baxter, NE SW SW Sec. 35-8-16w. Drlg. 1,280 ft.

Russell County

Braden & McClure No. 1 Blehm, SW SW NW Sec. 11-14-14w. S.O. 2,530-35 ft.; T.D. 2,565 ft.; U.R.

Central Pet. No. 1 Crisman, SW NW NE Sec. 20-14-14w. R.U.

Cities Service No. 1 Dutt, NW NW SE Sec. 18-13-14w. Pay 3,130-33 ft., T.D.; P. 80 B.O. in 8 hrs.; pot. 241 B.O.; comp.

Phillips Pet. No. 1 Maier, SW SW NE Sec. 15-15-14w. Lans. 3,002 ft.; Arb. 3,249 ft.; cg. 3,250 ft.

Shell Oil Co. No. 1 Berrick, NW NW SE Sec. 13-15-13w. Drlg. 1,025 ft.

A. H. Witt No. 1 Speere, SW SW NE Sec. 7-14-14w. Drlg. 540 ft.

Sherman County

Goodland Ind. Gas Co. No. 1 Wilcoxson, SE NW Sec. 27-8s-39w. T.D. 1,100 ft.; est. 25,000 cu. ft. gas.

Stafford County

Stanolind O. & G. No. 2 Sittner, NE SW SW Sec. 3-22-12w. Drlg. 3,563 ft.

Virginia Drlg. No. 1 Tieperman, NE NE SW Sec. 29-21-12w. Drlg. 1,250 ft.

Sumner County

E. W. Shawver No. 1-C Hitchcock, C N½ NE NE Sec. 16-30-1w. Miss. 3,557-60 ft.; T.D. 3,625 ft.; D.&A.

Woodson County

Roby et al No. 1 Mears, SW SW NW Sec. 21-25-14. Bville. 1,367-70 ft.; S.O.; S.D.

MISSOURI

Andrew County

Bradley Bros. et al No. 1 Gee, NW NW SE Sec. 28-60n-35w. T.D. 715 ft.; S.D.

Jones & Hyde No. 1 Holt, SE NW NE Sec. 34-60-35w. Drlg. 475 ft.

Bollinger County

Delmund Oil No. 1 Cooper, SE SE SE Sec. 14-29-9e. Drlg. 1,450 ft.

Butler County

Coastal Pet. et al No. 1 Pierson, SW NE NW Sec. 27-22-6e. T.D. 131 ft.; drlg. cmt.

Clay County

Eastern Drlg. Co. No. 1 Williams, NW NW NE Sec. 28-53-32w. S.S.O. 475-80 ft.; gas 595 ft.; S.D. 910 ft.

Clinton County

C E King et al No. 1 Willis, NE SE SE Sec. 13-55n-32w. Miss. 895 ft.; H.F.W. 1,398-1,406 ft.; S.D. 1,500 ft.

DeKalb County

Geo. W. Moore No. 1 McQuate, NE SW SW Sec. 11-57n-31w. Miss. 1,075 ft.; rng. 8-in. to 1,223 ft.

Hickory County

J. W. Sims No. 1 Wilson, NW NW NW Sec. 3-37n-21w. Drlg. 1,629 ft.; H.F.W.

Holt County

Brin & Nathan No. 1 Decker, C NW NW Sec. 1-61-38w. Spd. and S.D.

Brin & Nathan No. 1 Garrett, C NE NE Sec. 1-61n-38w. Loc.

Markham et al No. 1 Gaffney, SW SE SW Sec. 24-63-40w. R.R.

J. H. Everitt et al No. 1 Spring, SW SW SE Sec. 30-62-38w. Cmtd. 6-in. pipe at 2,750 ft.; drlg. ahd.

Jackson County

Missouri Valley G. & O. Co. No. 1 Young, SW NW NE Sec. 30-51-34w. Drlg. 557 ft.

Mercer County

Geo. W. Moore No. 1 Castell, NE NE NE Sec. 32-65-24w. Loc.

Platte County

Berry Bros. No. 1 Rule, C SW SW Sec. 20-53-33w. Bville. 812-914 ft.; Burgess 958-61 ft.; drlg. 1,371 ft.

Putnam County

E. F. Slater et al No. 1 Sayer, NE NW SE Sec. 14-65-18w. St. Peter sd. 1,375-1,525 ft.; showed fresh wtr.; Arb. L. 1,608 ft.; drlg. 1,618 ft.

Schuyler County

T. E. Baldwin No. 1 May Johnson, NW NE NE Sec. 21-65-15w. Mch.

Shelby County

Wright & Turner No. 1 Turner, C NW NW Sec. 27-59n-9w (wildcat). S.D. 215 ft.

Sullivan County

H. V. Elwell No. 1 Taylor, CNL S½ S½ Sec. 12-62-21w. Moving in tools.

G. H. Vaughn No. 2 J. Jones, C SE NE Sec. 21-17-20. Drlg. anhy. 3,655 ft.

G. H. Vaughn No. 1 L. Pasehal, C SE NW Sec. 22-17-20. Drlg. sdy. sh. 6,774 ft.

Craighead County

Tanmark, Inc., No. 1 R. M. Martin, Sec. 35-14-3e. Drlg. L. 2,273 ft.

Lafayette County

East Texas Ref. Co. et al No. 1-B Patten, C S½ NE NE Sec. 24-16-24. Set 10¾-in. csg. 112 ft.; W.O.C. 130 ft.

East Texas Ref. Co. et al No. 1 Warren Est., C N½ NE NW Sec. 24-16-24. Set 10¾-in. csg. 1,210 ft.; cd. 3,320-40 ft., 5 ft. ool. L., S.O., rest bl. sh. and limy sh.; drlg. 3,347 ft.

Standard Oil Co. of La. No. 6 McKean, 660 ft. NE cor., SE SW Sec. 7-16s-22w. T. Smackover L. 7,201 ft.; T. soft L. 7,205 ft.; stuck D.S.; fsg.

J. C. Stephens No. 1 J. A. Allen, C N½ NW NW Sec. 30-16-23. Set 10¾-in. csg. 112 ft.; W.O. 115 ft.

Little River County

C. & M. Drlg. Co. No. 1 Strawn, SW cor. SE Sec. 20-10-32. Cd. 1,270-80 ft.; sh.& wtr. sd.; reported S.O. 1,365-70 ft.; 1,542-64 ft. sd. and 1,564-74 ft. sdy. L.; cor. T.D. 1,598 ft.; set 7-in. csg. 1,590 ft. (cor.); T.D. 1,750 ft.; S.D.

Lonoke County

Cabot Drlg. Club, Inc., No. 1 Benson townsite, Sec. 18-4n-9w. Reported S.O. 1,400-50 ft.; hole clean; ran survey to 2,573 ft.; P.B. 1,470 ft.; set 4½-in. csg. 1,390 ft.; T.D. 1,470 ft.; W.O.

Miller County

Vacarro & Waterman No. 1 Westbrook, C SW SW Sec. 1-20-28. T. por. L. 6,165 ft.; set 5½-in. csg. 6,164 ft.; acidized with 3,500 gal.; swbd. 2 B.P.H. until swbd. dry; S.D.W.O. 6,192 ft.

Ouachita County

J. E. Crosbie, Inc., No. 2 F. A. Laney, Sec. 36-15-16. Stk. 5⅛-in. 2,777 ft.; set 966 ft. at 2,777 ft.; W.O.C. T.D. 2,832 ft.; perf. 2,678-82 ft.; tstd. est. 2,000 ft. S.W.; P.B. 2,550 ft.; drld. out to 2,626 ft.; reperf. csg. 2,570-82 ft.; S.W.; reperf. csg. 2,586-96 ft.; pmpd. S.W.; P.B. 2,420 ft.; perf. 2,282-88 ft.; pmpg. 150 B.P.D. fluid, incl. 5 bbl. oil; arng. recement.

Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. SE cor. SE NW Sec. 27-15-15. O.W.W.O.; O.T.D. 4,926 ft.; comp. as disc. well, Snow Hill field; perf. csg. 2,732-35½ ft., 2,728-31½ ft., 2,744-47½ ft., and 2,756-60 ft.; est. 2,300 ft. F.I.H., 1% oil; P.B. 2,770 ft.; set cmt. retainer 2,719 ft.; sqzd.; S.D.; W.O. 2,746 ft.

Pike County

Bruce E. Wallace No. 2-A Glenn Tilyeu, 320 ft. N, 330 ft. W SE cor. Sec. 26-8s-24w. Set 6-in. csg. 385 ft.; reported S.O. 400 ft.

Union County—Schuler

E. M. Jones No. 1-C Murphy Ld. Co., Sec. 24-18-18. Cd. Jones sd. 7,560 ft.; T.D. 7,640 ft.; set 7-in. csg. 7,620 ft.; perf. 7,560-85 ft.; swbd. S.W.; recmtd. csg. 7,544 ft.; perf. 7,562-83 ft.; swbg. to test.

Lion Oil Ref. Co. No. 1 S. Bessie, C S½ Lot 5, NW Sec. 7-18-7. 10¾-in. csg. 1,935 ft.; drlg. r. and gr. sh. 5,053 ft.

Lion Oil Ref. Co. No. 2 Clay, 330 ft. N, 660 ft. W, SE cor. NE SW Sec. 12-18-18. T. Jones sd. 7,629 ft.; 7-in. csg.; T.D. 7,713 ft.

Lion Oil Ref. Co. No. 1 S. Frank, C S½ SW NE Sec. 12-18-18. Fsg. D.S. 6,727 ft.

Lion Oil Ref. Co. No. 1 S. John, SE cor. SE NE Sec. 12-18-18. T. Jones sd. 7,577 ft.; 7-in. csg. 7,650 ft.; T.D. 7,675 ft.

Phillips Pet. Co. No. 1 Mill, NW cor. S½ Lot 4, SW Sec. 18-18-17. T. Jones sd. 7,547 ft.; 7-in. csg. 7,687 ft.; T.D. 7,700 ft.

Union County—Other

S. S. Alexander No. 1 J. P. Pickering, C NW NW SW Sec. 31-16-15. Cd. 2,151-52 ft.; soft por. sat. sd., salty taste; D.S.T. S.S.W.; cd. 2,152-58 ft.; rec. 2 ft. por. S.W. sd.; cd. 2,490-2,510 ft., gr. shaly sd. and hd gr. sd.; S.D., rig repair 2,540 ft.

Bob Milam No. 1 Primm Est., SE cor. Lot 5, NE Sec. 1-16-16. S.D. 2,359 ft.

Sam Sebersky No. 3 J. N. Jerry, Sec. 21-17-14. Cd. 2,701-13 ft.; set 5½-in. csg. 2,718 ft.; drlg. wtr. sd. 2,516 ft.; P.B. 2,665 ft.; perf. 2,706-09 ft.; swbd. S.W.; S.D.W.O. 2,718 ft.

NORTH MISSISSIPPI

Clarke County

Jeremiah L. Ryan et al No. 1 M. Eddins, 500 ft. SE cor. Sec. 29-2n-14e. S.D. 1,502 ft.

Lowndes County

Ryan & Anderson No. 1 Swoope, Sec. 3-19s-18w. Set 9-in. csg. 1,162 ft.; T.D. 4,006 ft.; abd.

Hinds County

Tatum et al No. 1 S. F. Johnson, NE cor. Sec. 29-6n-1w. S.D. 5,218 ft., sd.; arng. D.D.; erecting 122-ft. drk; sdtrkd. hole at 4,370 ft.; S.D. 6,500 ft.; P.B. 3,337 ft.; perf. csg. 3,330-21 ft.; swbd. S.W.; abd.

Humphreys County

Union Prod. Co. No. 1 C. B. Boy, Sec. 29-14n-4w. Cg. 3,815 ft.

Lafayette County

Adams O. & G. Co. No. 1 Lewellen, Sec. 9-10s-1w. Drlg. sh. 675 ft.

Prentiss County

Home Dev. Co. No. 1 Allen, Sec. 8-7s-9e. Drlg. L. 875 ft.

Simpson County

Cleve Love No. 1 N. E. Garner, SW cor. SW NE Sec. 1-10n-17w. S.D. 3,145 ft.

ARKANSAS

Bradley County

Amerada Pet. Corp. No. 1 Bradley Lbr. Co., 660 ft. N, 460 ft. E, SW cor. SE NE Sec. 14-17-10. R.U.

Columbia County

Ark. Fuel Oil Co. No. 1 Glasgow-Crisp, 603 ft. N, 605 ft. W, SE cor. NE SW Sec. 23-17-20. Drlg. sdy. sh. 6,750 ft.

Arkansas Fuel Oil Co. No. 1-C D. Glasgow, C NW SW Sec. 23-17-20. Set 9⅝-in. csg. 2,207 ft.; W.O.C.

Atlantic Ref. Co. No. 1 J. A. Foster, C NW NE Sec. 24-17-20. T.D. 4,026 ft.; P.B. 3,195 ft.; drlg. gr. sh. 6,137 ft.; reported S.O.; cd. 5,329-46 ft.

Atlantic Ref. Co. No. 1 Pine Woods Lbr. Co., C NE NE Sec. 16-18-22. Set 9⅝-in. csg. 4,102 ft.; drlg. 6,230 ft.

Atlantic Ref. Co. No. 1 L. Spain, C SW SW Sec. 18-17-19. Drlg. 3,977 ft.

Lion Oil Ref. Co. No. 1 Tissue, C SW NW Sec. 15-18-19. T.D. 7,090 ft.; fsg. 10 jts. D.S. 3,000 ft.

Mid-Continent Pet. Corp. No. 1 Foster, C NE SW Sec. 24-17-20. Drlg. 3,430 ft.

Oliphant Oil Co. No. 1 J. Jones, C SE SE Sec. 16-17-20. Set 13⅜-in. csg. 120 ft.

Phillips Pet. Co. No. 1 J. A. Joiner, C SE NE Sec. 22-17-20. Drlg. rd. sdy. sh. 7,100 ft.

Phillips Pet. Co. No. 1 L. A. Longino, C SW SE Sec. 15-17-20. T. Smkvr. L. 7,390 ft.; cg. 7,674 ft.

Placid Oil Co. No. 1 R. A. Couch, C NW NW Sec. 19-17-19. T.D. 7,525 ft.; 7-in. 7,575 ft.; drlg. plug.

Shell Pet. Corp. No. 1 Peoples Bnk. of Columbia, C NW SW Sec. 24-17-20. Cg. 7,601 ft.

Southwood Oil Co. No. 2 Foster, C SE NE Sec. 24-17-20. Drlg. 2,003 ft.

Southwood Oil Co. No. 1 D. Glasgow et al, C NE NE Sec. 22-17-20. Drlg. 3,516 ft.

Standard Oil Co. of La. No. 1-B Lewis Unit, 660 ft. SW cor. NE NE Sec. 15-17-19. T.D. 2,469 ft.; set 9⅝-in. csg. 2,450 ft.; drlg. 4,919 ft.

Twin City Syndicate No. 1 J. H. Hollensworth, 1,320 ft. E, 660 ft. S NW cor. SW¼ Sec. 31-17-18. Set 13⅜-in. csg. 148 ft.; T.D. 196 ft.

LOUISIANA

N. LOUISIANA WILDCATS

Bienville Parish

Ark. La. Gas Co. No. 2 Gayoso, 660 ft. SW cor. SE Sec. 14-16-10. T. Tr. Pk. 5,432 ft.; D.S.T. 5,796-5,805 ft. tstd. dry in 26 min.; set 8⅝-in. csg. 6,300 ft.; T.D. 8,319 ft.; set csg.; per. 8,285-8,314 ft.; flwd. est. 2,000,000 cu. ft. gas and sprayed S.W.; acdzd. with 6,000 gal. and tstd. est. 4,000,000 cu. ft. gas and spray S.W.; perf. 8,110-70 ft. and 8,306-12 ft.; flwd. 39 bbl. dist., 16 bbl. S.W. and 1,500,000 cu. ft. gas on ¼-in. ck.; acdzd. with 2,000 gal. and tstd. same; R.P. 2,818 lb.; drlg. sh.&L. 8,407 ft.; D.S.T. 8,310-8,404 ft.; tstd. 750 ft. mud cut with gas in 1 hr. 47 min.; drlg. hd. sd. 8,427 ft.

Hunt Oil Co. No. 1 T. A. Loe, C NE Sec. 2-16-6. T.D. (cor.) 6,678 ft.; rmg.

Bossier Parish

H. M. Harrell et al No. 1 Thompson Unit, 70 ft. NW, C SE Sec. 20-17-11. Drlg. 2,629 ft.

Caddo Parish

J. G. Bailey No. 2 Muslow, 672 ft. S, 396 ft. W, NE cor. SE NW Sec. 17-20-15. O.W.D.D.; O.T.D. 2,198 ft.; T.D. 3,058 ft.; S.D.; W.O.

Frank G. Bandein No. 1 Caddo Levee Bd., 150 ft. S, 350 ft. W, NE cor. NW SE Sec. 26-21-16. Drlg. 100 ft.

Burton & Harlan No. 1-A Perche, 500 ft. S, 747 ft. E, C Sec. 1-20-16. Set 10-in. 60 ft.; drlg. sh. 1,355 ft.

Drillers, Inc., No. 1 Ellerbe, SW cor. Sec. 23-18-14. Set 5½-in. csg. 5,554 ft.; acdzd. with 3,500 gal. and tstd. 1,500 ft. O.I.H.; S.D.; W.O. 5,560 ft.

W. C. Feazel and Eagle Prod. Corp. No. 1 Caddo Mercantile Co., 2,310 ft. W, 955 ft. S, NE cor. Sec. 5-23-15. R.U.; W.O.

M. M. Ferrell No. 1 Satterwhite, SE NW Sec. 10-20-16. Set 6-in. csg. 1,335 ft.; tstd. S.W.; S.O. 1,580 ft.; acdzd. with 3,000 gal.; tstd. S.W.; S.O.; S.D. 2,010 ft.; rng. 4½-in. csg. 2,263 ft.; tstg.

Harry Fotiades No. 1 Furman, 393 ft. S, 870 ft. E NW cor. NE Sec. 35-18-14. Set surf. csg. 297 ft.; W.O.C.

Hamilton & Stone No. 1 Atlanta, 500 ft. S, 244 ft. W, NE cor. NW Sec. 2-20-16. Set 6-in. csg. 1,701 ft.; tstg.

J. M. Harper No. 1 Walker, 453 ft. E, 510 ft. S NW cor. Sec. 28-18-14. R.U.

L. & A. Oil Co. No. 3 Burton, 1,163 ft. E, 979 ft. S, NW cor. Sec. 7-20-15. R.U.

C. H. Lyons et al No. 1 Agurs, 760 ft. N, 710 ft. W, SE cor. Sec. 34-18-14. Set 9⅝-in. csg. 1,302 ft.; drlg. anhy. 4,454 ft.

W. W. McDonald No. 1 Burton, 300 ft. S, 550 ft. E, NW cor. NW NW Sec. 7-20-5. R.U.

Natal Oil Co. No. 5 Stiles, 400 ft. NE cor. NW NW Sec. 27-21-16. Set 7-in. csg. 1,020 ft.; T.D. 1,024 ft.; W.O.S.R.

Natal Oil Co. No. 6 Stiles, 1,120 ft. E, 150 ft. N, SW cor. Sec. 22-21-16. Set 7-in. csg. 1,031 ft.; W.O.S.R. 1,036 ft.

J. Ober & Sons No. 2 fee, 920 ft. N, 200 ft. W, C Sec. 36-2-16. Cg. 2,275 ft.

Oblinger & Ritter No. 3 Boisseau, 1,220 ft. N, 1,310 ft. E, SW cor. SE Sec. 34-21-16. S.D. 820 ft.

Red Iron Drlg. Co. No. 1 Agurs, 1,900 ft. S, 715 ft. E, NW cor. Sec. 25-18-14. 9⅝-in. csg. 1,462 ft.; drlg. 1,491 ft.

John Schmidt No. 2 Sproull, 970 ft. N, 570 ft. W, SE cor. Sec. 32-20-16. Drlg. sh. 1,341 ft.

Seymour Oil Co. No. 1 Hughes et al, 330 ft. NE cor. NW Sec. 15-20-15. Drlg. 2,157 ft.

Simplex Oil Co. No. 12 Youree, C SW SE Sec. 13-20-15. R.U.

Stanolind O. & G. Co. No. 1, 131 Dillon Hrs., C SE NE Sec. 14-21-15. Set 16-in. csg. 494 ft.; 10¾-in. csg. 4,520 ft.; cd. oil sd. 3,912-20 ft.; 3,922-26 ft., and 3,941-45 ft.; D.S.T. 3,900-47 ft.; tstd. 170 ft. mud; S.O. 400 ft. S.W. 7 min.; ¾-in. ck.

Joe Strahan No. 2 Hart, 1,208 ft. N, 320 ft. E, SW cor. Sec. 29-21-16. Set 6-in. csg. 2,214 ft.; W.O.S.R. 2,404 ft.
Joe Strahan No. 2 Stiles, 3,658 ft. N, 1,050 ft. E, SW cor. Sec. 29-21-16. Drlg. 1,010 ft.
Joe G. Strahan No. 2-A Stiles, 4,165 ft. N, 473 ft. E, SW cor. Sec. 29-21-16. R.U.
Texas Co. No. 53 C. M. L. Co., Sec. 23-21-15. Set 6⅝-in. csg. 1,485 ft.; T.D. 1,491 ft.; W.O.C.

Caldwell Parish

Critchett & Woods (formerly E. T. Oakes) No. 1 Kyles, NE cor. SW NE Sec. 18-11-3e. S.D. 2,476 ft.; W.O.

Catahoula Parish

Ross Morel et al No. 1 Ballard Est., 330 ft. SE cor. SE SW Sec. 8-9n-7e. Drlg. sh. 1,010 ft.

De Soto Parish

Daniel Murray No. 1 Russell, 50 ft. N, 500 ft. W, SE cor. NE NW Sec. 12-11-16. O.W.D.D.; O.T.D. 2,046 ft.; T.D. 2,166 ft.; drlg. sh. 2,260 ft.
Roosth & Genecov Prod. Co. No. 1 Woolums, 990 ft. S, 330 ft. E NW cor. SW¼ Sec. 29-12-12. Set 10-in. 80 ft.; W.O.C.

La Salle Parish

G. C. Walsenham No. 4 Dean, 300 ft. W No. 3, Sec. 23-9n-1e. Set 6⅝-in. csg. 1,627 ft.; T. sd. 1,628 ft.; hole full oil.

Sabine Parish

Ed Bailey No. 1 Hale, 330 ft. NW cor. NE NW Sec. 6-7-12. Set 10-in. csg. 60 ft.
Geo. Ellis No. 1 Walker, 500 ft. NW cor. NW SE Sec. 8-4-12. Set 12½-in. csg. 276 ft.; reported S.O. 2,180 ft. and 2,263-65 ft.; rng. csg. 2,269 ft.; cd. sdy. sh. 2,265-69 ft.; set 7-in. csg. 2,250 ft.; S.D. rig repair 2,790 ft.
Okla.-Tex. Tr. No. 2 Frost Lbr. Ind., 330 ft. SE cor. NE SW Sec. 22-9-13. Set 12½-in. csg. 84 ft.; 8-in. csg. 1,568 ft.; T. chk. rk. 1,568 ft.; tstg. 1,699 ft.
K. R. Phillips No. 1 Craig, 335 ft. S, 330 ft. E NW cor., SE Sec. 22-9-13. R.U.
W. M. Quick No. 1 Sabine, SE cor. NE NE Sec. 8-7-13. Tstd. S.O. 2,397 ft.; drlg. sh. and shells 2,885 ft.
H. M. Sneed No. 1 Leone, SW cor. NW SE Sec. 8-7-13. T.D. 1,962 ft.; drlg. sh. 2,005 ft.
A. Tillman No. 1 Ritter, 400 ft. NE cor. SE SW Sec. 26-8-12. S.D. 1,900 ft.
J. A. Williams No. 1 Long Bell Lbr. Co., 250 ft. S. 550 ft. W, C Sec. 33-8-14. Drlg. sh. 1,820 ft.

Tensas Parish

Continental Oil Co. No. 1 Cammack, 1,690 ft. S, 330 ft. W, NE cor. Sec. 31-13-12e. Set 10¾-in. csg. 1,623 ft.; T. salt 4,124 ft.; cg. salt 4,135 ft.

Webster Parish

Geo. Barham No. 1 A. J. Hodges, 1,916 ft. N, 728 ft. E, SW cor. Sec. 23-21-10. O.T.D. 4,574 ft.; jnkd. hole; skdd. 75 ft. N and spdd. new hole; 9⅝-in. csg. 1,275 ft.; drlg. sh. 2,048 ft.
Hunt Oil Co. No. 1 Coffee. C SW NW Sec. 19-21-9. Drlg. L. 4,795 ft.
Hunt Oil Co. No. 30 Hope. 100 ft. W. C NE SW Sec. 30-21-10. Drlg. sdy. sh. 7,507 ft.
Hunt Oil Co. and Magnolia Pet. Co. No. 1 Gray-Cox. SW cor. Sec. 19-21-9. Drlg. hd. sd. 8,276 ft.
Hunt Oil Co. No. 1 Stewart. NW SE Sec. 32-21-10. Set 9⅝-in. 5,672 ft.; T. Cotton Valley 8,074 ft.; T. "D" sd. 8,450 ft.; light O.S.; T. Bod. 8,547 ft. (cuttings); drlg. sdy. sh. 8,788 ft.
Magnolia Pet. Co. No. 1 Roseberry Unit, 20 ft. N and W, C SE Sec. 29-23-9. Drlg. hd. sd.&sh. 7,681 ft.
Ohio Oil Co. No. 6 Bodcaw, Acct. 4, 660 ft. NE cor. NW Sec. 13-21-10. Holloway sd. 5,773-79 ft.; 9⅝-in. csg. 5,767 ft.; T.D. 5,855 ft.; W.O.C.
Oliphant Oil Corp. No. 2-A Hodges, 660 ft. W, 460 ft. S, NE cor. Sec. 3-20-10. Drlg. sh.&L. 4,626 ft.
O. F. Shaver No. 1 Stewart, 150 ft. S, 563 ft. E, NW cor. SW NE Sec. 4-18-10. Drlg. sh. 1,115 ft.
Stanolind O. & G. Co. No. 2 Pardee, Sec. 25-21-10. Drlg. L. 4,150 ft.
Union Prod. Co. No. 1 Walker Unit, 50 ft. S. C SE Sec. 30-18-8. Set 9⅝-in. csg. 6,490 ft.; T. Pettit 6,665 ft.; T. Tr. Pk. 6,910 ft.; drlg. hd. sd.&sh. 10,383 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Alfred Boudoin, Sec. 58-12s-3e. Drlg. sh. 8,320 ft.
Continental Oil Co. No. 1 David Meaux, Sec. 9-12s-3e. R.U.
Continental Oil Co. No. 1 Franciol, Sec. 67-12s-3e. Drk.
Continental Oil Co. No. 1 Lucion Duhon, Sec. 17-12s-3e. T.D. 10,762 ft.; 7-in. csg. 10,316 ft.; P.B. 10,201 ft.; cd. sd., S.O. &G. 10,112-70 ft.; perf. csg. 10,140-55 ft.; rec. mud and gas; perf. csg. 10,-159-60 ft.; set cmt. retainers; W.O.C.
Stanolind O. & G. Co. No. 1 Blanchet, Sec. 67-12s-3e. T.D. 8,009 ft.; 7-in. csg. 7,938 ft.; perf. csg. 7,880-85 ft.; I.P. 33 bbl. dist. per day; 12/64-in. ck.; killed well; perf. csg. 7,701-06 ft.; I.P. 211 B.P.D.; ¼-in. ck.

Bancroft—Beauregard Parish

Republic Prod. Co. No. 7 Lutcher Moore, Sec. 14-6s-13w. T.D. 3,000 ft.; 5½-in. csg. 7,963 ft.; oil sd. 7,901-08 ft.; perf. csg. 7,898-7,900 ft.; tstd. S.W.; perf. csg. 7,896-98 ft.; tstd. oil and S.W.
Republic Prod. Co. No. 8 Lutcher Moore Lbr. Co., Sec. 14-6s-13w. Drlg. sh. 6,627 ft.
Republic Prod. Co. No. 1 Nettie Smith Sec. 15-6s-13w. Loc.

Bateman Lake—St. Mary Parish

Texas Co. No. 2 State-Bateman Lake, Sec. 21-16s-12e. 13⅜-in. csg. 1,700 ft.; T.D. 9,453 ft.; sdtrkd. 6,880 ft.; drld. into old hole; P.B. 6,580 ft.; sdtrkd.; T.D. 9,156 ft.; P.B.; sdtrkd.; drlg. sh. &L. 9,658 ft.

Baton Rouge—East Baton Rouge Parish

W. V. Bowles No. 1 Richard Community, Sec. 46-7s-1e. T.D. 6,676 ft.; 5½-in. csg. 4,395 ft.; perf. csg. 4,340-52 ft.; I.P. 1,000,000 cu. ft. gas; 5/32-in. ck.
Geo. Echols No. 1 J. Gebelin, Sec. 66-7s-1w. R.U.
Geo. Echols No. 1 Geo. F. Morgan, Sec. 68-7s-1w. T.D. 6,506 ft.; 7-in. csg. 6,481 ft.; I.P. 400 B.P.D.; 11/64-in. ck.
Guaranty Oil Co. No. 1 D. J. Morgan. 9⅝-in. csg. 1,169 ft.; T.D. 3,708 ft.; P. B. to 2,065 ft. to strghtn. hole; sdtrkd.; T.D. 6,539 ft.; sdtrkd.; drlg. 6,050 ft.
Wm. Helis No. 3-D Duplantier, Sec. 66-7s-1w. Drlg. sd.&gvl. 646 ft.
Wm. Helis No. 1 Farris-Middleton, Sec. 66-7s-1w. Loc.
Geo. Helis et al No. 1 Haase Community, Sec. 64-7s-1e. T.D. 7,303 ft.; abd.
Wm. Helis No. 1-D Duplantier, Sec. 66-7s-1w. Oil sd. 6,465-72 ft.; T.D. 6,472 ft.; run 7-in. csg.
Wm. Helis No. 1 P. Mazzarisa, Sec. 66-7s-1w. T.D. 6,480 ft.; run 7-in. csg.
Lisbon-Iberia Oil Co. No. 2 Duplantier, Sec. 66-7s-1e. T.D. 6,469 ft.; 7-in. csg. 6,454 ft.; tstg.
T. G. Markley-Crosby Drlg. Co. No. 1 Knox et al, Sec. 66-7s-1w. 10¾-in. csg. 1,960 ft.; T.D. 6,476 ft.; 7-in. csg. 6,448 ft.; I.P. 300 B.P.D.; ¼-in. ck.
T. G. Markley-Crosby Drlg. Co. No. 2 Knox et al, Sec. 66-7s-1w. Loc.

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 3-B State-Bay, Sec. 13-22s-17e. T.D. 10,513 ft.; tried to blow out; P.B. 6,904 ft.; W.O.C.
Texas Co. No. 19 State-Bay St. Elaine, Sec. 18-22s-18e. Loc.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 11 Wilberts, Sec. 67-9s-11e. Loc.

Bayou des Allemands—St. Charles Parish

Amerada Pet. Corp. No. 4 St. Charles Ld. Co., Sec. 13-15s-2e. Loc.

De Large—Terrebonne Parish

Fohs Oil Co. No. 1 Buckley-Mahler, Sec. 25-19s-16e. 13⅜-in. csg. 3,380 ft.; 9⅝-in. csg. 10,058 ft.; drlg. sh. 12,120 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 29 State, Sec. 17-23s-20e. Rig.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 26 Sch. Ld., Sec. 16-14s-13w. T.D. 2,465 ft.; 13⅜-in. csg. 2,465 ft.; T.D. 6,564 ft.; P.B.; sdtrkd.; T. salt 8,059 ft.; T.D. 8,065 ft.; P.B. to 2,845 ft.; sdtrkd.; T.D. 7,-172 ft.; fsg.; set whpstk. 7,082 ft.; stk. D.S.; fsg.
Magnolia Pet. Co. No. 24 Cameron Meadows Ld. Co., Sec. 21-14s-13w. Top salt 5,246 ft.; P.B. to sdtrk.; T.D. 5,348 ft.; 7-in. csg. 5,223 ft.; perf. csg. 5,160-75 ft.; rec. dry gas; perf. csg. 4,710-20 ft.; I.P. 125 B.P.D.; 12/64-in. ck.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 1 Cypress, Sec. 75-15s-15e. Dredge canal.
Sun Oil Co. No. 4 Delbert Stark and Brown Cypress Co., Sec. 70-15s-15e. T.D. 7,794 ft.; P.B. 6,764 ft.; sdtrkd.; T.D. 8,268 ft.; stk. D.S.; shot at 8,195 ft.; P.B. 7,642 ft.; sdtrkd. 7,642 ft.; T. D. 8,260 ft.; 9⅝-in. csg. 8,260 ft.; T.D. 8,292 ft.; cleaned hole; found csg. collapsed; recmtd. csg.; rmg. 7,176 ft.; found leak in csg.; recmtd.; P.B. 7,968 ft.; sdtrkd. 8,249 ft.; P.B. 2,200 ft.; sdtrkd.; drlg. sh.&L. 3,646 ft.

Chalkley Field—Cameron Parish

Humble O. & R. Co. No. 4 Hanzen. 10¾-in. csg. 2,745 ft.; T.D. 8,672 ft.; perf. csg. 8,650-70 ft.; I.P. 297 B.P.D.; ¼-in. ck.
Shell Oil Co., Inc., No. 2 Hanzen, Sec. 21-12s-6w. Drlg. sh. 7,230 ft.

Charenton—St. Mary Parish

Fifteen Oil Co. No. 1 T. Brulation, Sec. 19-13s-10e. 7-in. csg. 8,509 ft.; drlg. sdy. sh. 9,748 ft.
Pan American Prod. Co. No. 1 Achee, Sec. 21-13s-9e. Loc.
Pan American Prod. Co. No. 14 Laws Realty Co., Sec. 30-13s-10e. T.D. 7,405 ft.; P.B. 6,950 ft.; sdtrkd.; T.D. 8,009 ft.; P.B. 7,219 ft.
Pan American Prod. Co. No. 7 Robichaux, Sec. 11-13s-9e. T.D. 1,051 ft.; 7-in. 1,035 ft.; R.U. to pmp.
Pan American Prod. Co. No. 5 South Coast, Sec. 30-13s-10e. T.D. 8,805 ft.; tstg.

Cheneyville—Rapides Parish

Gulf Oil Corp. No. 1 M. B. Pope. Sec. 4-1s-2e. Drlg. sh. 7,393 ft.
Texas Canadian Oil Co. No. 2 Pope, Sec. 56-1s-2e. T.D. 5,845 ft.; P.B. 1,650 ft.; sdtrkg. 1,810 ft.

Convent—St. James Parish

Continental Oil Co. No. 2 Colonial Sugars, Inc., Sec. 50-12s-4e. 18⅝-in. csg. 220 ft.; T.D. 2,025 ft.; W.O.C.
Continental Oil Co. No. 2 Realty Operators, Inc., Sec. 16. 13⅜-in. csg. 1,-492 ft.; T.D. 7,889 ft.; P.B. 7,275 ft.; sdtrkd. 7,305 ft.; T.D. 8,235 ft.; well blew out; caught fire; cleaned hole to 4,866 ft.; P.B. 2,502 ft.; sdtrkd.; T.D. 7,967 ft.; 9⅝-in. csg. 7,950 ft.; T.D. 8,765 ft., salt.

Creole—Cameron Parish

Superior Oil Co. No. 7 State, Gulf of Mexico. Drlg. sh. 1,050 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 22 Community, Sec. 32-10s-2e. R.U.
Humble O. & R. Co. No. 5 Landry, Sec. 34-10s-2e. T.D. 7,054 ft.; run elec. sur.
Kiva Oil Co. No. 1 Duplessis, Sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 Dog Lake, Sec. 5-22s-16e. Drlg. sh. 7,528 ft.

Edgerly Field—Calcasieu Parish

J. G. Sutton Oil Co. No. 1 Reed, Sec. 29-9s-11w. Drlg. sh. 1,310 ft.

Eola—Avoyelles Parish

Amerada Pet. Corp. No. 1 Avoyelles Bnk. & Tr. Co., Sec. 5-2s-3e. Drlg. sh. 6,857 ft.
Amerada Pet. Corp. No. 1 Haas Inv. Co., Sec. 10-2s-2e. R.U.
Amerada Pet. Corp. No. 2 Mrs. C. B. Machine, Sec. 6-2s-3e. Loc.
Amerada Pet. Corp. No. 1 Merchants & Planters Bnk., Sec. 41-1s-3e. Loc.
Amerada Pet. Corp. No. 1 Robert Irion, Sur., Sec. 6-2s-3e. 9⅝-in. csg. 1,462 ft. drlg. sdy. L. 7,528 ft.
W. C. Feazel No. 1 Leila Keller, Sec. 7-2s-1e. Drlg. sh. 6,520 ft.
Gulf Expln. Co. No. 5 Samuel Haas Est., Sec. 8-2s-3e. T.D. 7,006 ft.; P.B. 6,450 ft.; crooked hole; sdtrkd.; T.D. 8,584 ft.; 5½-in. csg. 8,584 ft.; perf. csg. 8,560-80 ft.; flwd. oil and S.W.; killed.
Geo. E. Lilly et al No. 1 Haas Inv. Co., Sec. 1-2s-2e. 10¾-in. csg. 1,500 ft.
Pomo Prod. Co. No. 2 Sentell, Sec. 8-2s-3e. Drlg. sh. 6,649 ft.
Sid Richardson No. 5 Haas Inv. Co., Sec. 5-2s-3e. T.D. 8,565 ft.; 5½-in. csg. 8,565 ft.; perf. csg. 8,470-8,540 ft.; I.P. 790 B.P.D.; ¼-in. ck.
Sid Richardson No. 1 S. S. Pierce, Sec. 6-2s-3e. T.D. 8,540 ft.; tstg.
Sid Richardson No. 2 State Bayou Boeuf, Sec. 7-2s-3e. Drlg. sh. 6,526 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 34 State, Sec. 38-23s-33e. T.D. 4,600 ft.; 7-in. csg. 4,574 ft.; perf. csg. 4,495-4,513 ft.; I.P. 240 B.P.D.; ⅛-in. ck.

Golden Meadows—La Fourche Parish

Geo. Lilly et al No. 1 Jack Collins, Sec. 12-19s-22e. S.D. 8,293 ft.
M. H. Marr and R. A. Bristol No. 1 Church property, Sec. 2-19s-22e. R.U.
M. H. Marr and G. H. Vaughn No. 1 B. & D. Unit, Sec. 12-19s-22e. 10¾-in. csg. 2,301 ft.; cg. sh.&shils. 8,887 ft.
Martex Pet. Corp. No. 2 Falgout Holding Co., Sec. 9-19s-22e. R.U.
St. Mary Oil Co. No. 1 Choust Unit, Sec. 12-19s-22e. Drlg. sh.&shils. 4,383 ft.
Taylor Fithian et al No. 1 Etenne Perrin, Sec. 12-19s-22e. R.U.
Terouche Oil Co. No. 1 D. B. Cheramie, Sec. 12-19s-22e. Cg. sd. 4,431 ft.
Texas Co. No. 2 State-Catfish Lake, Sec. 3-20-21e. Drlg. sh.&L. 6,675 ft.
Texas Co. No. 3 State-Catfish Lake, Sec. 76-19s-21e. Loc.
John Vocarro et al No. 1 D. and B. Cheramine, Sec. 12-19s-22e. R.U.

Grand Bay—Plaquemines Parish

Gulf Oil Corp. No. 4 Grand Prairie Lve. Dist., Sec. 48-20s-18e. T.D. 9,700 ft.; 7-in. csg. 9,664 ft.; T. oil sd. 9,678 ft.
Gulf Oil Corp. No. 6-A Grand Prairie Lv. Dist., Sec. 17-20s-10e. Dredge canal. I.P. 770 B.P.D.; ¼-in. ck.; T.P. 1,750 lb.; C.P. 250 lb.; grv. 37.2.
Gulf Oil Corp. No. 2 State, Sec. 6-20s-19e. 9⅝-in. csg. 9,431 ft.; T.D. 10,300 ft.; 7-in. csg. 10,299 ft.; will perf. 9,-275-90 ft.

Grand Lake—Cameron Parish

Amerada Pet. Corp. No. 1 Mallard Bay-State, Sec. 12-13s-4w. R.U.
Superior Oil Co. No. 2 State, Twp. 13s-4w. Drlg. sh. 4,898 ft.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 25-A Erwin, Sec. 13-12s-10w. Drk.
Stanolind O. & G. Co. No. 28-A Gulf fee, Sec. 30-12s-10w. Drlg. sh. 6,884 ft.
Superior Oil Co. No. 1 R. Vincent, Sec. 31-12s-10w. Drlg. sh. 4,707 ft.
Texas Co. No. 26 State, Twp. 12s-9w. T.D. 8,038 ft., salt; run csg.
Union Sulphur Co. No. 8 Caldwell, Sec. 37-2s-10w. T.D. 7,344 ft.; 7-in. csg. 7,-319 ft.
Union Sulphur Co. No. 12 Doiron, Sec. 37-12s-10w. T.D. 8,064 ft.; P.B.; sdtrkd.; drlg. sh. 6,812 ft.
Union Sulphur Co. No. 1 Josephine O'Quinn, Sec. 37-12s-10w. T.D. 6,927 ft.; sdtrkd.; 7-in. csg. 8,014 ft.; T.S. 8,220 ft.; drlg. sh. 9,318 ft.

Horseshoe Bayou

Texas Co. No. 2 St. Mary Parish Ld. Co., Sec. 37-17s-9e. T.D. 10,883 ft.; run csg.

Jefferson Island—Iberia Parish

Phillips Pet. Co. No. 1 Breaux, Sec. 41-12s-5e. Drlg. sh. 8,489 ft.
Texas Co. No. 2 State-Lake Peigneur, Twp. 12s-5w. T. salt 7,419 ft.; T.D. 7,-437 ft.; P.B. 6,292 ft.; P.B. and sidetracked; T.D. 7,964 ft., salt.

Jennings—Acadia Parish

Carter-Perrin & Brian No. 1 Valle-Arpent, Sec. 47-9s-2w.. T.D. 1,870 ft.; 6⅝-in. csg. 1,830 ft.; I.P. 150 B.P.D.; pmpg.
St. Mary Oil Co. No. 1 Gulf fee, Sec. 45-9s-2w. R.U.
Shell Oil Co., Inc., No. 7 Conover, Sec. 40-9s-2w. Drlg. 5,199 ft.
Stanolind O. & G. Co. No. 114 Crowley Oil & Mineral Co., Sec. 48-9s-2w. T.D. 3,755 ft.; P.B. 1,293 ft.; P.B. 1,900 ft.; sdtrkd.; T.D. 4,581 ft.; 10¾-in. csg. 4,-578 ft.; drlg. sh. 5,947 ft.
Superior Oil Co. No. 4 Moresi, Sec. 41-9s-2w. Drlg. sdy. sh. 5,175 ft.

Lafitte—Jefferson Parish

Texas Co. No. 13 Lafitte, Sec. 17-17s-24e. Drlg. sdy. sh. 7,349 ft.
Texas Co. No. 2-B Madison Realty Co., Sec. 19-17s-24e. M.I.M.
Texas Co. No. 2 Sch. Bd., Sec. 20-17s-24e. T.D. 6,601 ft.; sdtrkd. 6,375 ft.; went back into old hole; trying to sdtrk. at 6,387 ft.; T.D. 10,766 ft.; 7-in. csg. 10,195 ft.; perf. csg. 9,876-9,900 ft.
Texas Co. No. 2 State-Bayou Norman, Sec. 21-17s-24e. 10¾-in. csg. 1,942 ft.; T.D. 10,018 ft.; oil sd. 9,978-98 ft.; 7-in. csg. 9,955 ft.; I.P. 450 B.P.D.; ¼-in. ck.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 10 La Fourche Basin Levee Dist., Sec. 2-18-25e. Drlg. sd. 4,-135 ft.

Lake Long—La Fourche Parish

Fohs Oil Co. No. 9 State, 600 ft. S of No. 6 State in lake, Twp. 17s-19e. Drlg. sh. 2,770 ft.

Leesville—La Fourche Parish

Texas Co. No. 21 L.L.&E., Sec. 27-21s-22e. 10¾-in. csg. csg. 1,441 ft.

Lake Mongoulois—St. Martin Parish

Texas Co. No. 7 State, Sec. 10-10s-9e. Cg. sh. 9,295 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 W. E. Mont, Sec. 32-19s-19e. Loc.
Humble O. & R. Co. No. 2 La Terre Ld. Co., Sec. 32-19s-19e. T.D. 8,450 ft.; 5-in. csg. 8,449 ft.; perf. csg. 8,435-45 ft.; I.P. 3,544,000 cu. ft. gas
Humble O. & R. Co. No. 3 Laterre Land Co., Sec. 32-19s-19e. Loc.

New Iberia—Iberia Parish

Canal Oil Co. No. 12 Bernard, Sec. 54-12s-7e. T.D. 3,274 ft.; 7-in. csg. 3,274 ft. I.P. 250 B.P.D.; ⅛-in. ck.
Wm. Helis No. 6 Sabatier, Sec. 53-12s-2e. Drlg. sh. 1,503 ft.
Wm. Helis No. 7 J. E. Schwing, Sec. 56-12s-7e. Drlg. sh. 4,556 ft.
Texas Co. No. 2 Bryant, Sec. 25-12s-7e. R.U.
Texas Co. No. 1 Frances Compton, Sec. 71-12s-7e. Drlg. sh. 6,267 ft.
Texas Co. No. 1 Anna B. Schwing, Sec. 71-12s-7e. Tstd. S.W. 4,735-83 ft.; W. O.C.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 4 H. J. Habetz, Sec. 45-8s-1e. 10¾-in. csg. 2,017 ft.; T.D. 8,240 ft.; perf. csg. 8,215-18 ft.; tstd. S.W.; prep. to perf. csg. 6,723-28 ft.; tstd. S.W.; abd.
Humble O. & R. Co. No. 2 Staker, Sec. 33-8s-1e. Loc.

North Tepetate—Acadia Parish

Atlantic Ref. Co. No. 5 Klumpp, Sec. 7-7s-1w. Drlg. sh. 3,327 ft.
St. Mary Oil Co. No. 1 Dr. H. Jenkins, Sec. 12-7s-2w. Drlg. sd.&sh. 7,629 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 7 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 8 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 3 Haas & Hirsch, Sec. 4-6s-5e. T.D. 6,932 ft.; fsg.
Smith & McDannald No. 1 S. W. Futral, Sec. 20-6s-5e. T.D. 4,841 ft., salt; P.B.; prep. to sdtrk.; T. salt 4,832 ft.; sidetracked; T.D. 4,160 ft.; stk. D.S.; sidetracked at 3,000 ft.; drld. to 4,160 ft.; stk. D.S.; P.B. 3,025 ft.; to sdtrk.
Y. D. Spill No. 1 Gaudet, Sec. 4-6s-5e. S.D. 4,700 ft.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 39 Orleans Lve. Bd., Sec. 13-8s-15e. 16-in. csg. 244 ft.; T.D. 4,548 ft.; stk. D.S.; S.D.; crew on vacation.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 10 State QQ, Sec. 17-19s-17e. 9⅝-in. csg. 8,175 ft.; T.D. 8,-562 ft.; 7-in. csg. 8,562 ft.; perf. csg. 8,545-57 ft.
Gulf Oil Corp. No. 9 State QQ, Sec. 18-19s-17e. Loc.
Gulf Oil Corp. No. 5 State, Sec. 17-19s-17e. Loc.

Raceland—La Fourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., Sec. 34-15s-19e. 18⅝-in. 11,312 ft.; T.A.

Tide Water Asso. Oil Co. No. 2-A South Coast Corp., Sec. 34-15s-19e. 10,461 ft. 5½-in. csg. 10,253 ft.; perf. csg. 10,120-138 ft.; csg. began to leak; cmtd.; P.B. 9,300 ft.; csg. parted at 1,244 ft.; cemented break; W.O.C.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 16 United Ld. Co., Sec. 15-10s-4e. S.D. 1,472 ft.
Scrrento Synd. No. 1 L. L. Bernard, Sec. 27-10s-4e. R.U.

South Houma—Terrebonne Parish

Shell Pet. Corp. No. 3 Peters. T.D. 10,316 ft. oil sd.; make D.S.T.; rec. 1 stand 36.7-gr. oil; 1 jt. oily mud; D.S.T. 10,151-60 ft.; 5½-in. csg. 10,302 ft.; I.P. 615 B.P.D.; ¼-in. ck.; T.P. 1,510 lb.; C.P. 2,515 lb.

South Roanoke—Jeff Davis Parish

Continental Oil Co, No. 1 Calcasieu Natl. Bnk., Sec. 36-10s-4w. Drlg. sh. 9,706 ft.

Starks—Calcasieu Parish

Skelly Oil Co. No. 1 Industrial Lbr. Co., Sec. 20-9s-12w. Drlg. sh. 3,278 ft.

Valencia—La Fourche Parish

T. G. Markley and Mohawk Oil Corp. No. 1 Deusson Hrs., Sec. 100-17s-20e. T.D. 6,905 ft.; sdtrkd.; T.D. 6,825 ft.; trying to sdtrk.
Pan American Prod. Co. No. 20 Harang, Sec. 8-17s-20e. T.D. 4,608 ft.; sdtrk.; drlg. sh. 5,366 ft.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co. No. 5 Buras Lv. Bd., Sec. 23-21s-30e. T.D. 8,616 ft.; stk. D.S.
Tide Water Asso. Oil Co. No. 10 Manhattan Ld. & Fruit Co., Sec. 26-21s-30e. S.D. 290 ft.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 Attales, Sec. 45-3s-2e. Drlg. sh. 1,520 ft.
Continental Oil Co. No. 2 Opelousas, Sec. 44-3s-2e. Drlg. sh. 9,220 ft.
Continental Oil Co. No. 2 Orise Deville, Sec. 46-3s-2e. T.D. 9,060 ft.; rng. csg.
Continental Oil Co. No. 3 Orise Deville, Sec. 46-3s-2e. Drlg. sh. 7,246 ft.
Continental Oil Co. No. 1 J. E. Vidrine, Sec. 47-3s-2e. T.D. 10,506 ft.; sdtrkd.; T.D. 10,507 ft.; perf. csg. 10,360-80 ft.; tstd. mud; perf. csg. 10,350-60 ft.; rec. salty mud; abd.
Continental Oil Co. No. 2 Vidrine. Sec. 34-3s-2e. T.D. 9,108 ft.; perf. csg. 9,082-9,105 ft.; I.P. 410 B.P.D.; ¼-in. ck.

Welsh—Jeff Davis Parish

C. W. Buckley et al No. 1 Calcasieu Natl. Bnk., Sec. 34-9s-5w. R.U.R.

West Gueydan—Vermilion Parish

Magnolia Pet. Co. No. 2 J. B. Ferguson, Sec. 5-12s-2w. Drlg. sh. 1,820 ft.

West Lake Verret—St. Mary Parish

Shell Oil Co., Inc., No. 3 Jeanerette Lbr. Co. 10¾-in. csg. 2,493 ft.; cg. sh. 8,260 ft.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 5 Calcasieu Natl. Bnk., Sec. 12-9s-6w. Drlg. sh. 8,950 ft.
Union Sulphur Co. No. 1 Raymond Hebert, Sec. 6-9s-5w. Drlg. sh. 4,816 ft.
Union Sulphur Co. No. 1 M. F. Johnson, Sec. 12-9s-6w. T.D. 9,313 ft.; fsg.
Union Sulphur Co. No. 3 Mrs. O'Miller, Sec. 7-9s-5w. Drk.

S. LOUISIANA WILDCATS

Acadia Parish

Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. M.I. rig.

Allen Parish

Bel Oil Corp. No. 1 J. A. Bel, Sec. 22-6s-3w. Cd. gas sd. 6,257-87 ft.; S.W. sd. 6,287-97 ft.; T.D. 9,010 ft.; run 7-in. csg. 8,595 ft.; perf. csg. 8,549-52 ft.; tstd. 40 lb. pres.; rec. 18 stands S.W.; drlg. mud cut with gas and dist.; perf. csg. 6,917-19 ft.; tstd. S.W.; P.B. 6,004 ft.; perf. csg. 6,041-50 ft.; rec. 3 stands oil, 15 stands of oil and gas-cut mud showing S.W.; sqzd. perf.; perf csg. 6,025-36 ft.; tstd. 600 lb. pres.; rec. 4 stands drlg. mud, slight trace of dist.; sqzd. perf.; perf. csg. 6,040-50 ft.; tstd. 25 lb. pres.; dropped to 0; rec. 11 stands of fresh wtr.; 8 stands mud and sd., slightly salty; perf. csg. 7,272-92 ft.; well freezing up; prep. to run bttm.-hole ck.

Assumption Parish

Shell Oil Co. No. 1 Ellis, Sec. 66-16s-14e. Drlg. sh. 10,516 ft.

Avoyelles Parish

Adams O. & G. Co. et al No. 1 Poor Farm, Sec. 8-2n-4e. Loc.
G. C Koch et al No. 1 Purdy Hess Lbr. Co., Sec. 25-2n-3e. O.W.D.D.; T.D. 6,054 ft.; M.I.R.

Beauregard Parish

Atlantic Ref. Co. No. 1 Lutcher Moore, Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1 Rice Ld. & Lbr. Co., Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1-A Rice Ld. & Lbr. Co., Sec. 22-3s-11w. T. Cook Mtn. 6,628 ft.; T.D. 8,518 ft.; 5½-in. csg. 8,518 ft.
Standard Oil Co. of Calif. No. 1 Long Bell Lbr. Co., Sec. 23-4s-9w. T. Cckfld 6,949 ft.; 9⅝-in. csg. 7,830 ft.; cd. top Wix. sd. 9,630 ft.; T.D. 10,692 ft.; fsg.

Calcasieu Parish

Humble O. & R. Co. No. 1 Edgewood Ld. & Logging Co., Sec. 32-7s-10w. Drlg. sd. 6,969 ft.
Union Sulphur Co. No. 2 Drew Manuel Training Sch., Sec. 17-10s-11w. Drlg. sh. 8,482 ft.

Evangeline Parish

Continental Oil Co. et al No. 1 Mrs. Lillie Manuel, Sec. 33-4s-1w. T. Vicksburg 7,740 ft.; drlg. sh. 11,147 ft.

Iberia Parish

Texas Co. No. 3-B State-Vermilion Bay, Twp. 16s-5e. T. salt 5,970 ft.; B. salt 7,540 ft.; 9⅝-in. csg. 7,705 ft.; drlg. sh.&L. 10,060 ft.

Iberville Parish

Housh & Thompson No. 1 Kessler & Folse, Sec. 40-11s-13e. T.D. 9,165 ft.; fsg.; sdtrkd.; drld. to 8,929 ft.; stk. D.S.
Humble O. & R. Co. No. 1-B A. Wilberts Lbr. & Shingle Co., Sec. 78-8s-8e. R.U.
Shell Oil Co., inc., No. 1 Natalbany Lbr. Co., Sec. 18-9s-2e (tight well). T.D. 10,524 ft.; P.B. 9,100 ft.; perf. csg. 9,060-65 ft.; made sqz. job; perf. csg. 9,035-56 ft.; rec. 23 stands oil and S.W.; P.B. 9,057 ft.; pulling tbg.

Jeff Davis Parish

R. M. Bleakie et al No. 1 Lack-Moore Co., Ltd., Sec. 29-7s-6w. 13⅜-in. csg. 65 ft.; 9⅝-in. csg. 1,123 ft.; drlg. sh. 5,655 ft.
Stanolind O. & G. Co. No. 3-B Ervin & Bishop, Lot 15, Sec. 7-9s-5w. Drlg. sh. 4,861 ft.
Union Sulphur Co. No. 1 H. B. Tietje, Sec. 36-7s-4w. T.D. 9,220 ft.; 7-in. csg. 8,227 ft.; perf. csg. 8,051-65 ft.; swbd. S.W.; pulling screen and inr.; P.B. 7,648 ft.; perf. csg. 7,632-46 ft.; showing S.W. and oil; P.B. 7,639 ft.; perf. csg. 7,628-38 ft.; failed to flw.; prep. to reperf. csg.; perf. csg. 7,629-33 ft.; swbd. dry; perf. csg. 7,636-38 ft.; swbd. S.W.
Union Sulphur Co. No. 2 H. B. Tietje, Sec. 36-2s-4w. Drk.

La Fourche Parish

J. Perry Scranton No. 2 Martinez, Sec. 132-15s-17e. Drlg. sh. 8,520 ft.
Texas Co. No. 1 L.L.&E. Golden Meadows, Sec. 77-19s-21e. 9⅝-in. csg. 10,744 ft.; T.D. 12,526 ft.; P.B. 11,810 ft.; made sqze. job; perf. csg. 10,769-71 ft.; tstd. S.W.; P.B. 10,269 ft.; stk. D.S.; drlg. on junk; perf. csg. 8,975-90 ft.; tstd. dry gas, 2,750 lb. W.P.; perf. csg. 7,300-20 ft., rec. drlg. mud; perf. csg. 4,400-30 ft.; tstd. dry gas; sqzd. perf.; perf. csg. 4,405-4,530 ft.; perf. csg. 4,435-45 ft.; D.S.T. rec. gas-cut mud; S.D.
Tide Water Asso. Oil Co. No. 1 Delta Farms, Inc., Sec. 6-17s-23e. Loc.

Livingston Parish

Fowler & Tower No. 1 Ellis Hood, Sec. 37-7s-3e. M.I.M.

Orleans Parish

W. T. Burton No. 3-B Faubourg de Montluzin, Sec. 1-11s-13e. Drlg. sh. 6,700 ft.
W. T. Buton No. 1 L.&N.R.R., Sec. 18-11s-15e. T.D. 9,000 ft.; 7⅝-in. csg. 8,820 ft.; T.D. 10,138 ft.; well tried to blow out; set retainer; drlg. sh. 9,850 ft., in new hole.
W. T. Burton No. 3 L.&N.R.R., Sec. 25-11s-14e. Loc.
W. T. Burton No. 2 State-Lake Pontchartrain, Twp. 10s-10e. Loc.

Plaquemines Parish

Gulf Oil Corp. No. 8 State P.P., Sec. 18-23s-31e. Loc.

St. Bernard Parish

Carter, Molero & Brian, Sec. 129-14s-14e. Drk.
Gulf Ref. Co. No. 4-State-R.R. (Lake Borgne), Twp. 12s-15e. 9⅝-in. csg. 8,161 ft.; T.D. 10,632 ft.; P.B. 9,700 ft.; rmd. to 9,658 ft.; lost core bbl.; P.B. sdtrkd. 9,612 ft.; T.D. 10,528 ft.; 7-in. csg. 10,494 ft.; fsg.
Vendome Pet. Co. No. 2 Kenilworth Plantation, Sec. 59-13s-14e. Cg. sd.& sh. 10,378 ft.

St. Charles Parish

Texas Co. No. 1 L.L.&E. Paradis, Sec. 39-14s-20e. 9⅝-in. csg. 8,975 ft.; T.D. 10,787 ft.; twisted off D.S.; fsg.; C.O. hole 10,200 ft.; 7-in. csg. 10,177 ft.; perf. csg. 10,060-70 ft.; tstd. gas; sqzd. perf.; perf. csg. 9,840-50 ft.; tstd. 2,000 lb. press.; flwd. est. 5 bbl. dist. per hr.; perf. csg. 9,608-20 ft.; tstd. 2,800 lb. pres.; flwd. 8 to 10 bbl. dist. per hr.; prep. to P.B. 9,503 ft.; perf. csg. 9,485-9,503 ft.; flwd. 6 bbl. 40-gr. dist. per hr.; ¼-in. ck. on D.S.T.; 2,600 lb. pres.; sqzd. off perf.; perf. csg. 8,895-8,730 ft.; flowed ½ bbl. dist. per hr.; ¼-in. choke; 3,000 lb. W.P.; will drill out and comp. at 9,815-9,915 ft.; I.P. 120 bbl. wtr. white dist. per day; ¼-in. ck.; T.P. 3,000 lb.

St. Landry Parish

Deep Rock Oil Co. No. 1 B. Rabineaux, Sec. 39-8s-4e. Drlg. sd.&sh. 8,310 ft.

St. Martin Parish

Shell Oil Co., Inc., No. 1 Iberville Ld. Co., Sec. 86-8s-7e. Loc.
Texas Co. No. 12 St. Martin, Sec. 21-8s-7e. Drlg. 1,810 ft.

St. Mary Parish

Acadian Prod. Co. No. 1 Robichaux, Sec. 27-13s-9e. T.D. 2,165 ft.; pulled in drk.
Perry S. Cooney No. 1 A. W. Allain, Sec. 46-13s-9e. S.D. 2,600 ft.

St. Tammany Parish

Honey Island Dev. Corp. No. 1 W. C. Forbes, Sec. 33-7s-15e. T.D. 100 ft.; 20-in. csg. 87 ft.

Terrebonne Parish

Shell Oil Co., Inc., No. 1-A Peters, Sec. 47-19s-19e. Loc.

Vermilion Parish

La. Ld. & Expln. Co. No. 1 La. Fur. Co., Sec. 21-15s-1e. Drlg. sh. 9,709 ft.

Vernon Parish

W. T. Burton No. 1 W. T. Burton Mineral fee, Sec. 32-1n-6w. Drlg. sh. 6,750 ft.
Nat Hunter et al No. 1 W. T. Burton fee, Sec. 13-2n-5w. Drk.

West Feliciana Parish

McKay et al No. 1 James Montgomery. Loc.

TEXAS

Week Ending July 1

GULF COAST FIELDS

Old Ocean—Brazoria County

Harrison & Abercrombie No. 2 Larsen et al. C. Breen Sur. 9⅝-in. csg. 7,000 ft.; T.D. 10,552 ft.; tstg.
Harrison & Abercrombie No. 1 C. W. Markle, Polly & Chance Sur. 9⅝-in. csg. 7,016 ft.; T.D. 11,079 ft.; sdtrkd.; drlg. sh. 7,987 ft.
Harrison & Abercrombie No. 2 Osburn, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; drlg. sd.&sh. 9,718 ft.
Mid-Continent Pet. Corp. No. 1 Wm. Chenault, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; drlg. 7,136 ft.
Sun Oil Co. No. 3 Campbell, C. Breen Sur. R.U.

Cedar Point—Chambers County

Standard of Texas et al No. 13-117 State. 10¾-in. csg. 1,600 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 2 Hoffman, T.&N.O. Sur. No. 131. R.U.

West Columbia—Brazoria County

Texas Co. No. 33 Abrams, G. Tennille Sur. Drlg. sd.&sh. 2,067 ft.

Thompson—Fort Bend County

H. M. Naylor No. 3 Musselman, H. Chrisman Sur. Drlg. 4,237 ft.
H. M. Naylor No. 1 M. W. Shanks, Horatio Chrisman Sur. Drlg. 3,636 ft.
H. M. Naylor No. 5 Musselman, H. Chrisman Sur. Bldg. rd.

Caplen—Galveston County

Sun Oil Co. No. 1 Zinn & Forman, S. F. Hughes Sur. Loc.

League City—Galveston County

Phillips Pet. Co. No. 1 Bryan, Perry & Austin Sur. R.U.&S.D.
Phillips Pet. Co. No. 1 Esperson-Phillips. S. F. Austin Sur. T.D. 9,330 ft.; run csg.
Phillips Pet. Co. No. 5 Bertha Lobit Wilson, Perry & Austin Sur. 10¾-in. csg. 2,541 ft.; drlg. sh. 7,296 ft.
Phillips Pet. Co. No. 1 Rice, Perry & Austin Sur. Drlg. sh. 2,026 ft.
Phillips Pet. Co. No. 3 Lobit Wilson, Perry & Austin Sur. Drlg. sh. 8,520 ft.
Phillips Pet. Co. No. 4 Lobit, Perry & Austin Sur. T.D. 9,339 ft.; 5½-in. csg. 9,160 ft.; tstd. dry gas.
Phillips Pet. Co. No. 2 Stewart Title Co., S. F. Austin Sur. T.D. 9,270 ft.; 7-in. csg. 9,180 ft.; perf. csg. 8,954-59 ft.
West Prod. Co. No. 1 fee, Lot 2, Blk. 5, Perry & Austin Sur. Loc.

Aldine—Harris County

Earl Hankamer No. 1 W. B. Rowland, Lots 42 and 43, E. Farias Sur. T.D. 7,284 ft.; 5½-in. csg. on bottom; perf. csg. 7,165-70 ft.; flwg. dist.; 5/64-in. ck.; killed; reperf. csg. 6,642-48 ft.; flwd. 11 bbl. dist. in 15 hrs.; ⅛-in. ck.

Clear Lake—Harris County

Humble O. & R. Co. No. 9-C Humble-West, Wm. Dobie Sur. Drlg. sh. 5,637 ft.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Angelo Cande Lari Reels & Trobough Sur. Perf. csg. 3,772-87 ft.; tstd. dry gas.
Stanolind O. & G. Co. No. 2 Edwards, Reels & Trobough Sur. Drk.

Eureka—Harris County

Jack Frazier No. 1 W. T. Helberg, H. Reinerman Sur. R.U.
Houston Oil Co. No. 3 Helberg & Lackner, J. Reinerman Sur. Loc.
Tide Water Asso. Oil Co. No. 2-B Lackner, H. Reinerman Sur. T.D. 8,090 ft.; perf. csg. 8,040-50 ft.; sqzd. perf.; perf. csg. 7,944-49 ft.; tstg.

Fairbanks—Harris County

Kirby Pet. Co. et al No. 1 Hillebrenner, T. M. Dorsett Sur. 9⅝-in. csg. 1,300 ft.; T.D. 6,849 ft.; perf. csg. 6,843-46 ft.; flwg. gas.
Union Prod. Co. No. 1 C. H. Daniel, S. S. Reynolds Sur. 10¾-in. csg. 1,479 ft. drlg. sh. 5,637 ft.

Friendswood—Harris County

Humble O. & R. Co. No. 33 Humble-West, A. Whitlock Sur. Drlg. L. 4,646 ft.
Humble O. & R. Co. No. 35 Humble-West, Luke Hemenway Sur. Drlg. sh. 4,520 ft.
Humble O. & R. Co. No. 8 West, T. Choate Sur. Drlg. L. 3,420 ft.
Humble O. & R. Co. No. 12 West, T. Choate Sur. T.S. 5,531 ft.; T.D. 6,044 ft.; comp.; no ga.

South Houston—Harris County

Commerce Oil Co. No. 1 O. R. Staiti, Callahan & Vince Sur. 10¾-in. csg. 1,516 ft.; drlg. sh. 5,526 ft.

Franciias—Jackson County

Crosby Drlg. Co. No. 1 Hale & Allee, Green Sur. S.D. 7,480 ft.

Cheek—Jefferson County

Humble O. & R. Co. No. 6 Broussard, M. Grange Sur. Loc.
Humble O. & R. Co. No. 1-B Steinhagen. Wm. Carr Sur. 7-in. csg. 7,912 ft.; T.D. 8,189 ft.; set cmt. retainer; W.O.C.

Clam Lake—Jefferson County

Shell Oil Co., Inc., No. 3 McFaddin, McFaddin Sur. T.D. 4,001 ft.; P.B. 3,675 ft.; prep. to perf. csg.

La Belle—Jefferson County

Sun Oil Co. No. 5 Broussard-Hebert, T. &N.O. Sur. No. 207. 18⅝-in. csg. 130 ft.; T.D. 7,650 ft.; cmtd. 9⅝-in. csg.; milling on csg.

South China—Jefferson County

Geo. Echols et al No. 2 Fontenot, H.T.& B. Sur. No. 17. R.U.

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Esperson—Liberty County

General Crude Oil Co. No. 3-B Esperson, A. McNeil Sur. T.D. 7,694 ft.; W.O.C.

Hardin—Liberty County

Gulf Oil Corp. No. 4 Cessna, H. B. Johnston Sur. R.U.

North Markham—Matagorda County

Ohio Oil Co. No. 2 Carlson, I.&G.N. Sur. No. 2. 10¾-in. csg. 1,472 ft.; T.D. 6,886 ft.; P.B. to strghtn. hole.

Conroe Field—Montgomery County

E. I. Thompson, Tr., No. 1 W. D. Granger, T.&N.O. Sur. No. 14 (Wilcox test SE. edge of prod.). 16-in. csg. 82 ft.; 10¾-in. csg. 1,800 ft.; drlg. sh 8,370 ft.

Orange—Orange County

Gulf Oil Co. No. 10-A Winfree, Wm. Dyson Sur. Drlg. sh. 4,020 ft.

John Mayo No. 1 M. J. Williams, Dyson Sur. R.U.

Ace—Polk County

Dick Schwab No. 1-C Kirby-West Lbr. Co., G. A. Thomas Sur. Loc.

Shell Pet. Corp. No. 2 Doucett, P. A. Sublett Sur. Loc.

Segno—Polk County

Gulf Oil Corp. No. 4 Quinn, A. Morales Sur. R.U.

Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. R.U.

Gulf Oil Corp. No. 17 Wing, I.&G.N. Sur. No. 14. T.D. 8,059 ft.; W.O.C.

Gulf Oil Corp. No. 19 Wing, I.&G.N. Sur. No. 14. T.D. 8,156 ft.; W.O.C.

Humble O. & R. Co. No. 13-B Kirby Lbr. Co., P. Garcia Sur. Bldg. rd.

Humble O. & R. Co. No. 14-B Kirby Lbr. Co., M. Victor Sur. Drlg. sh. 7,667 ft.

Orange—Port Neches

Texas Co. No. 15 Kuhn, A. E. Hall Sur. 10-in. csg. 1,794 ft.

Spurger—Tyler County

Republic Prod. Co No. 21 fee, N. Hurd Lge. 9⅝-in. csg. 1,807 ft.; T.D. 7,743 ft.; 5½-in. csg. 7,735 ft.

Republic Prod. Co. No. 22 fee, N. Hurd Lge. Drlg. sh. 6,526 ft.

GULF COAST WILDCATS

Brazoria County

Crosby Drlg. Co. No. 1 H. A. Paine, A. G. Reynolds Sur. R.U.

Fabriguze et al No. 1 Freeport Sulphur, Stephen F. Austin Sur. (Byran Mound). M.I.M.

Hamman Expltn. Co. No. 1 Darrington, Achilles McFarland Sur. 10¾-in. csg. 1,200 ft.; 7-in. csg. 8,887 ft.; T.D. 8,917 ft.; P.B. 8,490 ft.; sdtrkd.; drlg. sh. 8,476 ft.

Hamman Expltn. Co. No. 2 Darrington, State Prison Farm, F. Bingham Sur. W.O. rig.

Glenn McCarthy No. 1 J. C. Carr, J. D. Valderas Sur. W.O. rig.

Glenn McCarthy No. 1 Houston Farm Dev., James F. Perry and E. Austin Sur. No. 7. Drlg. sh. 8,902 ft.

Rowan Drlg. Co. No. 1 Vilren, J. S. Talmage Sur., Sec. 68. R.U.

Smith & McDannald No. 1 Slocum, Henry Austin Sur. T.D. 7,656 ft.; abd.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.

Plymouth Oil Co. No. 1 Wilburn, Wm. H. Moore Sur. 10¾-in. csg. 1,994 ft. drlg. sd.&sh. 7,373 ft.

L. D. Roberts No. 1 C. H. Lanz, T.&N. O. Sur. No. 35. 10¾-in. csg. 1,030 ft.

Colorado County

J. S. Farbriguze et al No. 1 J. R. Frazar, J. Earle Sur. Drlg. sh. 5,810 ft.

Cockburn Oil Corp. No. 1 R. W. Ferrs, H. Chrisman Sur. Loc.

Fort Bend County

Lloyd Farr et al No. 1 Beard, H.&T.C. Sur. No. 118. Bldg. drk.

O. J. Martin et al No. 1 W. B. Blakely, J. Frederick Sur. Drlg. sh. 3,036 ft.

Superior Oil Co. No. 1 Shirie Beard et al, H.&T.C. Sur. No. 111. 10¾-in. csg. 1,230 ft.; T.D. 7,132 ft.; heaving sh.

Woodland Oil Co. No. 1 Herletta Berg et al, H.&T.C. Sur., Sec. 25. T.D. 7,329 ft., sh.

Galveston County

Sun Oil Co. No. 1 State, East Galveston Bay. Drlg. sh.&sd. 646 ft.

Hardin County

Geo. Echols No. 1 Merchant Est., Stephen Jackson Lge. (E. flank Sour Lake field). Drlg. sh. 1,310 ft.

Norcoff Corp. No. 1 Caswell, B.B.B.&C. Sur. No. 72 (E flank Saratoga dome). T.D. 4,900 ft.; fsg.

Harris County

Housh & Thompson et al No. 1 J. L. Krey, B. Herra Sur. 10¾-in. csg. 759 ft.; drlg. sh.&shlls. 4,233 ft.

L. R. Wilhite et al No. 1 Houston-Harris Co. Ship Channel, Nav. dist., Ezekiel Thomas Sur. Loc.

J. H. Woodard, Jr., No. 1 Miller Est., John Skorupski Sur. T.D. 5,133 ft.; T.A.

Jackson County

L. Glasscock No. 1 J. H. Drummond, R. Musquiz Sur. T.D. 5,543 ft.; 7-in. csg. 5,528 ft.; I.P. 187 B.P.D.; 9/64-in. ck.

Humble O. & R. Co. No. 1 M. H. Toney, R. Musquiz Sur. Loc.

J. Mayo et al No. 1 J. H. Tucker, R. Musquiz Sur. 10¾-in. csg. 593 ft.

Moore & Ahern No. 1 Victoria Ld. & Loan Co., P. Scott Sur. Drlg. sh. 1,847 ft.

Norcuff Oil Corp. No. 1 Hollingsworth, Eli Mercer gr. Loc.

Jasper County

Bob Milner et al No. 1 Cartwright, E. O. LeGrande Sur. 10¾-in. csg. 1,042 ft.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two; S.D.

Hebert & Smith et al No. 1 L. D. Fontenot, Sec. 17, H.T.&B. Sur. T.D. 8,755 ft.; 5½-in. csg. 8,007 ft.; oil sds. 7,906-20 ft., 7,870-06 ft., 6,730 ft.; perf. csg. 7,875-85 ft.; flwd. 102 bbl. 12 hrs.; 9/64-in. ck.; T.P. 1,250 lb.; C.P. 1,010 lb.

Humble O. & R. Co. No. 15-B McFaddin Beach State, Gulf of Mexico, 660 ft. NW of No. 13-B. T.D. 5,222 ft.; 13⅜-in. csg.

Liberty County

Stanolind O. & G. Co. No. 1 E. M. Flowers, I.&G.N.R.R. Sur. 10¾-in. csg. 1,588 ft.; T.D. 9,109 ft.; perf. csg. 8,700-05 ft.; tstd. S.W.; perf. csg. 8,104-08 ft.; flwd. 400 B.F.P.D., 70% oil, bal. S.W. and mud; killed to retest.

Matagorda County

Continental Oil Co. No. 1 Savage, Daniel Yeamans Sur. T. sd. 3,842 ft.; well blew out; killed; T.D. 5,810 ft.; P.B. 4,195 ft.; perf. csg. 4,132-42 ft.; tstd. dry gas; killed; prep. to retest.

Orange County

American Eagle Oil Co. No. 2 Geo. Pell, Geo. A. Patillo Sur. Loc.

Polk County

Jack Frazier et al No. 2 Bergman, A. Viesca Sur. Drlg. sh.&sd. 4,829 ft.

S. W. TEXAS WILDCATS

Bastrop County

Joe Hughes et al No. 2 Lentz, Freeman Wilkinson Sur. No. 21. Cg. L. 2,290 ft.

Bell County

M. M. Gordon No. 1 Steele, Oliver T. Tyler Sur. S.D. 1,201 ft.

G. P. Shelton et al No. 1 Nelson, Michael Griffin Sur. S.D. 1,208 ft.

Bexar County

E. D. Harris No. 1 Schroeder, Luke Bust Sur. No. 37. Drlg. 175 ft.; no report.

Long Bros. Drlg. Co. No. 1 Applewhite, B. Ruiz Sur. No. 35. Cg. 2,020 ft.

Blanco County

H. C. McCart No. 1 Geo. Lester, Newton Carson Sur. No. 34. Drlg. 428 ft.

Brooks County

Magnolia Pet. Co. No. 2 Denman, Jose Marcelo Hinojosa gr. T.D. 5,590 ft.; fsg.

Cameron County

Salviejo and Pure Oil Co. No. 1 Gatewood and Dewberry, San Martin gr. T.D. 7,579 ft.; well tried to blow out; hole bridged; abd.

Duval County

W. L. Catlin et al No. 1 Louis Escapule, J. Poitevent Sur. No. 73. Loc.

Wm. Nichols et al No. 1 Tom Graham, Cuadrilla Irrg. Sur., Sec. 572. T.D. 4,800 ft.; rec. 630 ft. P.L.O.; D.S.T. 4,782-98 ft.; 5½-in. csg. on bttm.; reperf. csg. 4,784-90 ft.; flwg. 3 B.O.P.D.; ⅛-in. ck.; T.P. 1,600 lb.; C.P. 1,700 lb.

W. A. Wagner No. 1 D. J. Welkel, John H. Gibson Sur. No. 497. R.U. and S.D.

R. L. Wheelock No. 1 Serner, Sec. 290. T.D. 4,808 ft.; 5½-in. csg. 4,669 ft.; perf. csg. 4,612-15 ft.; tstd. S.W.; abd.

Edwards County

O. L. Alderfer and C. W. Davis No. 1 J. A. Earwood, C.C.S.D.&R.G.N.G.R.R. Sur., Sec. 158. S.D. 125 ft.

Frio County

Wilcox O. & G. Co. No. 1 R. H. Harris, Hooper & Wade Sur. No. 3. Drlg. Austin chk. 3,450 ft.

Goliad County

Cron & Gracey et al No. 1 O. G. Drier, B.S.&F. Sur. No. 7. Set 1,320 ft. of 7-in. lnr. at 5,190 ft.; T.D. 5,885 ft.; set 812 ft. of 5-in. lnr.; perf. 5,566-70 ft.; tstd. S.W.; W.O.; perf. csg. 5,866-70 ft.; tstd. S.W.; to reperf. csg. 5,767-70 ft.; tstd. S.W.; perf. csg. 5,552-55 ft.; tstd. S.W.

Guadalupe County

Burton, Garvin & Womack No. 1 Henry Weil, E. De los Santos Coy Sur. No. 93. L. O.S. 200-10 ft.; 6-in. csg. 210 ft. acd.; cmt. failed to hold; recmtd.; swbg. 5 B.O.P.D.; prep. to D.D.; S.D. 400 ft.

C. L. Felty No. 1 Warneke, Vicente Duran Sur. No. 4. Drlg. 1,006 ft.; no report.

Great Southern Oil Co. No. 1 Goodson, John Tom Sur. Drlg. sh. 1,430 ft.; no report.

John Hueners No. 1 Boecker, John Baker Sur. No. 26. S.D. 1,013 ft.

Hidalgo County

Shary Maddox No. 1 A. C. Neal, Santa Anita gr. Cg. sdy. sh. 5,988 ft.

Pantano Pet. Co. No. 1 R. E. Harding, La Mestena Rnh. subd. (La Blanca field). Drlg. sh. 7,580 ft.

Wheelock & Smith No. 1 Yturria Town & Imp. Co., Anastacio Villareal Por. No. 43. Cg. sh. 4,312 ft.; no report.

Jim Hogg County

Imperial Oil Co. No. 1 Jose M. Gutierrez, H. Rodriquez Sur. No. 142. 10-in. csg. 40 ft.

Johnson & Robinson No. 1 Palacios, Mary Montgomery Sur. T.D. 3,519 ft.; 5½-in. csg. 2,900 ft.

Magnolia Pet. Co. No. 1 Ysaquirre et al, "Agua Nueva de Abajo," J. M. Ramirez Sur. Spd.

Phillips Drlg. Co. No. 1 Allen, H.&G.N. Sur. No. 21. Cg. S.W. sd. 3,391 ft.; no report.

Jim Wells County

Loring Bradstreet No. 1 Rehment, Lot 12, Morro Phillips Sur. Loc.

Bridwell Oil Co. No. 1 Beasley La. Trinidad gr. T.D. 5,269 ft.; perf. csg. 5,232-38 ft.; I.P. 140 B.P.D.; ⅛-in. ck.

Gorman & Yoakam No. 1 J. A. Schmidt, Casa Blanca gr. Drlg. sh. 1,520 ft.

H. H. Howell No. 1 Lindsay & Reed, Teresa Bustillos Sur. Cg. 5,226 ft.

Magnolia Pet. Co. No. 1 J. O. Maun, Lot 6, Blk. 11. Cg. sh. 6,536 ft.

Pettus O. & R. Co. No. 1 R. Y. Garcia, S.A.&M.G. Sur. Cg. 5,356 ft.

W. R. Quinn et al No. 1 D. M. and Fritz Pundt, T. C. Wright Sur. S.D. 4,770 ft. 7-in. csg. 4,770 ft.; T.D. 5,415 ft.; P.B. 4,761 ft.; tstg.

Smith & Storey No. 1 Shaeffer, Stanley Welch Sur. No. 90. T.D. 2,335 ft.; 5½-in. csg. 2,335 ft.; perf. csg. 2,194-2,204 ft.; tstd. S.W.

Texas Gulf Prod. Co. No. 1 E. E. Miller, Benito Lopez De Jaen Sur. 5½-min. D.S.T. 5,093-5,101 ft.; 350 lb. pres.; cd. O.S. 5,150-55 ft.; D.S.T. rec. 1,000 ft. 38-gr. oil, 1,000 lb. W.P.; T.D. 5,613 ft.; T. sd. 5,143 ft.; I.P. 55 B.P.D.; 7/64-in. ck.; T.P. 1,500 lb.; C.P. 1,800 lb.

Karnes County

Paul Meador No. 1 Ruhman, J. Richardson Sur. Drk.

Kendall County

C. M. Dewey No. 2 Seidensticker, R. Davis Sur. No. 20. S.D. 714 ft.

Kenedy County

Humble O. & R. Co. No. 3 Kenedy rnh.-X. Salinas Sur. T.D. 7,705 ft.; abd.

Kimble County

W. S. Kelly No. 1 A. L. Bierchwale, D. Lloyd Sur. S.D. 95 ft.

La Salle County

Eugene Garner No. 4 Yeager, John H. Gibson Sur. No. 37. R.U.

Lavaca County

W. L. Goldston No. 1 Turk, Edwards Sur. Drlg. sh. 786 ft.

Lee County

Fred Pederson et al No. 1 Brown, David Hudson Sur. Pmpd. 100 B.F.; 36 hrs.; 3 bbl. oily emulsion; cd. L. 6,461-90 ft.; swbg. S.W.

Live Oak County

R. G. Pattillo No. 1 H. D. Miller, Willis Darby Sur. No. 4. Drlg. L. 3,984 ft.

Rupert P. Ricker No. 1 fee, Wm. O'Docherty Sur. No. 9. T.D. 2,318 ft.; abd.

L. W. Stieren No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

G. W. Basom No. 1 Jacob, W. H. Jacob Sur. No. 50. R.U.

Gilcrease Oil Co. No. 1 Shiner, Jose Aldrete Sur. No. 14. T.D. 2,314 ft.; abd.

F. H. Golhke No. 1 E. L. Miles, J. Poitevant Sur. T.D. 1,197 ft.; abd.

Gordon Grffin No. 1 Dilworth, R. A. Moore Sur. R.U.

Medina County

Victor Ziegler No. 1 Paul Haby, Wm. G. Still Sur. No. 1. S.D. 1,000 ft.

Milam County

Brown Carroll et al No. 1 John Hancock Life Ins. Co., Juan Jose Sur. Drlg. sh. 20 ft.

Nueces County

Bay-Tex Oil Co. et al No. 1 Dallas Joint Stock Ld. Bnk., Palo Alto gr., Sec. 148. Drlg. sdy. sh. 3,550 ft.

E. A. Graham et al No. 1 Sam Taylor. D. M. Oliver Sur., Sec. 465. S.D. 4,482 ft.

John Manley et al No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. Loc.

Mills Bennett Prod. Co. No. 1 Poenisch, E. Villareal Sur. Cg. sd. 4,937 ft.

Phillips Pet. Co. No. 1 Gandy, Geo. H. Pauls subd. of Driscoll ranch. R.U.

Reed & Cox No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. R.U.

Shield Oil Co. No. 1 Magee, Blk. 10, Driscoll ranch, Geo. Paul subd. 10¾-in. csg. 650 ft.; drlg. sh. 4,071 ft.

Texas Conservative Oil Co. No. 1 Bruno Bock, Sec. 44, Geo. H. Pauls subd., Driscoll ranch. T.D. 3,845 ft.; 7-in. csg. 3,840 ft.; perf. csg. 3,812-18 ft.; I.P. 115 B.P.D.; 9/64-in. ck.

Texas Conservative Oil Co. No. 1 J. E. Humble, Geo. H. Pauls subd., Driscoll ranch. Drlg. sh. 5,520 ft.

Texas Conservative Oil Co. No. 1 Julian Wright, Geo. H. Pauls subd. of Driscoll ranch. Drlg. sh. 3,450 ft.

Refugio County

Hewitt & Daugherty No. 2-A J. M. Aldrete Sur. Cg. 5,836 ft.

Humble O. & R. Co. No. 3 Laura Thomas, Patrick Downey Sur. T.D. 6,510 ft.; abd.

Phillips Pet. Co. No. 1 N. S. Hundson, T. Antonio Galian Sur. Cg. 5,871 ft.

Phillips Pet. Co. No. 1 Toland, Guadalupe Cobian & Family Sur. Drlg. sh. 4,228 ft.

Quintana Pet. Corp. No. 10 Williams, C. E.P.I.&M. Co. Sur. T.D. 6,220 ft.; perf. csg. 5,870-80 ft.; flwd. O.&S.W.; tstg.; no report.

San Patricio County

Seaboard Oil Co. No. 1 Blumberg, A.B. &M. Sur. No. 12. 10¾-in. csg. 1,074 ft.

Starr County

Herbert Aid No. 1 J. G. Escobas, J. J. Gutierrez Porc. 72. Drlg. sd. 742 ft.

Baldridge & Vessels No. 1 W. I. Cameron, Geo. W. Smith Sur. No. 228 (Rincon field). T.D. 4,239 ft.; rec. 100 ft. oil&S.W. on D.S.T.; cg. ahd.

Banks, Miller Oil Co. No. 1 McLean, Unit 3, Valle Del Rico Rio Grande subd., J. B. Villareal Porc. 75. Drlg. sh. 1,650 ft.

C. L. Foster No. 1 H. Garza, Juan Salinas, Porc. No. 71. S.D. 83 ft.

Liberty Oil Co. No. 1 Bass, S.K.&K. Sur. No. 71. S.D. 150 ft.

Lynes & Robertson No. 1 Villareal, C.C. S.D.&R.G.N.G.R.R. Sur. No. 241. Loc.

Magnolia Pet. Co. No. 2 Guerra, Santa Cruz gr. Drlg. sh. 1,780 ft.

W. W. Zimmerman No. 3 Tijerina, H. E.&W.T.R.R. Sur. No. 299. S.D. 600 ft.

Travis County

Oscar Raesz et al No. 1 J. W. Swahn, Phillips McElroy Sur. No. 16. T.D. 566 ft.; abd.

Williams & Bick No. 2 Montpelier Savings Bnk., C. Barker Sur. No. 38. S.D. 845 ft.

Victoria County

Carter, Rubsamen et al No. 1 G. W. Vogt, Victoria Townsite Sur. Loc.

Webb County

J. M. Anderson et al No. 1 Frost, C.C.S. D.&R.G.N.G.R.R. Sur. No. 17. Loc.

Boysen & Jones No. 2 Watkins, San Casimiro gr. Loc.

F. J. Hines No. 1 Bruni, M. T. Tippin Sur. Cg. 2,457 ft.

Houser & Campbell No. 1 Benavides, R. Benavides Sur. No. 692. 10¾-in. csg. 21 ft.

Gordon Rouse No. 1 Withers, G. B. Withers Sur. No. 52. S.D. 1,010 ft.

Rowan & Hope, Inc., No. 2 Laurel Bros., A. S. Laurel Sur., Blk. 4. Drlg. sh. 3,468 ft.

V. G. Schimmel No. 1 Benavides, B.S.& F. Sur. No. 693. R.U.

V. G. Schimmel No. 1 Walker, C.C.S.D. &R.G.N.G. Sur. No. 259. T.D. 1,723 ft.; abd.

Willacy County

Midwest Royalty Co. No. 1 Dayton, San Juan Decarriutas San Matias subd., Sh. No. 47. 10¾-in. csg. 2,370 ft.; T.D. 9,016 ft.

Williamson County

W. O. Caffey No. 1 J. Seggern, Hardy Pace Sur. S.D. 1,067 ft.

Wilson County

John F. Camp No. 1 Bundrick, H.&T.C. R.R. Sur. No. 111. 10-in. csg. 272 ft.; T.D. 2,795 ft.; abd.

Zapata County

Joe Martinez No. 2 Bruni, J. V. Borego gr. S.D. 355 ft.

WEST TEXAS WILDCATS

Andrews County

Richmond Drlg. Co. No. 1 University, Sec. 25, Blk. 12, Univ. Sur. Cg. 4,650 ft.

Brewster County

H. D. Wilcox No. 2 Kokernot, Sec. 23, Blk. C, J. V. Massey Sur. Drlg. 1,345 ft.

Crane County

P. A. Christian No. 1 M. F. Stephenson, Cert. 2044. W. H. Bates Sur. No. 40. S.D.O. 3,335 ft.

Gulf Oil Corp. No. 5 M. B. McKnight Sec. 1, Blk. 21-B, P.S.L. Sur. Drlg. 4,110 ft.

Crockett County

J. S. Pittman No. 1 Corbett-Humble, Sec. 15, Blk. 2-B, G.C.&S.F. Sur. S.D. csg. 190 ft.

Steel Dust Oil Co. No. 1 Geo. D. Atwood, Sec. 9, Blk. P.P., T.C.R.R. Sur. S.D. csg. 417 ft.

Crosby County

Gulf Oil Corp. No. 1-C Swenson, Sec. 95, Blk. 2, H.&G.N. Sur. Drlg. 5,387 ft.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. S.D. 3,662 ft.

Humble O. & R. Co. No. 1 Matador Ld. & Cattle Co., Sec. 26, Blk. 1, Shock & Arnold Sur. T.D. 7,074 ft.; drlg. plug 6,925 ft.; P.B. 6,133 ft.; prep. test.

Ector County

Barnes-Conklin & White No. 1 T.&P. Lds., Sec. 28, Blk. 45, T.&P. Sur. S.D. 4,752 ft.

J. D. Bodkins No. 1 H. F. Foster, Sec. 12, Blk. 43, T.&P. Sur. Drlg. wtr. well.
R. H. Gill No. 1 J. E. Parker, Sec. 12, Blk. 45, T.&P. Sur. W.O.R. 145 ft.
Sloan & Zook No. 1 J. L. Johnson, Sec. 34, Blk. 43, T.&P. Sur. Drlg. 4,174 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel. R.U.S.T.; to P.B. and sdtrk.; T.D. 3,571 ft.; side-tracking hole 1,925 ft.; S.D. 3,571 ft.

Gaines County

Stanolind O. & G. Co. No. 1 J. B. Rayner, Sec. 3, Blk. 30-C, P.S.L. Sur.; 6,000-ft. test. Drlg. wtr. well.

Glasscock County

J. R. Petty No. 1 Joe Blake, Sec. 163, Blk. 29, W.&N.W. Sur. U.R. 1,480 ft.
Shell Pet. Corp. No. 1 A. Neal, Sec. 38, Blk. 33, T.&P. Sur. Drlg. 3,661 ft.

Howard County

T. G. Shaw, Tr.-Texas Co. No. 1-B Wilkinson, Sec. 19, Blk. 34. Drlg. 4,541 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ Sec. 34, Blk. 74, Twp. 6, S.G. 6,340-45 ft.; swbg. 6,402 ft.
Haymon Krupp No. 1 Briggs, Sec. 24. Blk. 73, Twp. 7, T.&P. Sur. Drlg. 5,530 ft.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.&W.T. Sur. S.D.O. 4,450 ft.

Pecos County

L. Cain No. 1 Masterson-Lehn, Sec. 71 Blk. 10, H.&G.N. Sur. Drlg. 1,340 ft.
Greene & Goodman No. 1 Masterson, Sec. 105, Blk. 10, H.&G.N. Sur. Fsg. 945 ft.
Leidecker & Cain No. 1 M. M. Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. Csg. 1,743 ft.; flwg. 20 B.O.; 24 hr.; tstg. 1,783 ft.
Lloyd-Penn & Hargraves No. 1 H. E. Bonebrake, Sec. 110, Blk. 8, H.&G.N. Sur. Drlg. 155 ft.
O. E. Schade No. 1 Otis Garrett, Sec. 50½, Blk. 8, H.&G.N. Sur. Tstg. est. 35 B.O.P.D.; T.D. 2,290 ft.; swbg. est. 20 B.O.P.D.; 5 B.W.P.D.; testg. on pmp.; S.D. 2,290 ft.
Superior Oil Co. No. 1 V. W. Crockett. Sec. 7, Blk. 110, T.C.R.R. Sur. C.&P
Superior Oil Corp. No. 1 V. W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Sur. P.B. 1,447 ft.; tstg.
S. Thompson No. 1 Elsinore Cattle Co., Sec. 54, Blk. D, G.C.&S.F. Sur. Rig burned; dropped bailer in hole; S.D.O. 7,342 ft.
J. C. Trees No. 1 fee, Sec. 63, Blk. 3, H.&G.N. Sur. Tstg. on pmp.; est. 5 B. O.P.D. and 5 B.W.P.D.; S.D.O. 2,359 ft.
C. W. Williams No. 1 J. Eaton, Sec. 1, Blk. 203, J. H. Handy Sur. Prep. D.D. 3,058 ft.
C. W. Williams No. 1 T.&P. Ld., Sec. 95, Blk. 3, T.&P. Sur. P.B. from 1,840 ft.

Presidio County

L. C. Brite No. 4 fee, Sec. 113, Blk. 12, G.H.&S.A. Sur. S.D.O. 5,602 ft.
Marfa Oil Co. No. 1 Fischer ranch, Sec. 31, Blk. 8, G.H.&S.A. Sur. M.I.M.
H. D. Wilcox No. 2 Jones-Coffield, Sec. 308, Blk. 4, H.&T.C. Sur. C.O. 1,840 ft.

Reeves County

Artie Baker No. 1 J. W. Grider, Sec. 31, Blk. 58, P.S.L. Sur. S.D.R. 450 ft.

Schleicher County

Lone Star Gas Co. No. 1 Bert Page, Sec. 30, Blk. L, G.H.&S.A. Sur. T.D. 5,746 ft.; comp. 158 B.O.P.D.
Shell Oil Co., Inc., No. 1 Page, Sec. 41, Blk. L, G.H.&S.A. Sur. Abd. loc.

Scurry County

J. B. Stoddard No. 1 R. O. McClure, Sec. 142, Blk. 97, H.&T.C. Sur. W.O.C. 2,166 ft.
H. C. Wheeler No. 1 M. Sims, Sec. 141, Blk. 97, H.&T.C. Sur. Tstg. 18 B.O. in 17 hrs. 2,509 ft.

Stonewall County

Forest Dev. Co. and King Drlg. Co. No. 1 Moreland, Sec. 183, Blk. D, H.&T. C. Sur. Drlg. 5,190 ft.

Terrell County

Shirley, Lanham & Blakeney No. 1, Sec. 45, Blk. 2-B, C.C.S.D.&R.G.N.G. Sur.; 2,500-ft. test. S.D. csg. 268 ft.

Tom Green County

Lynn & Cobb No. 1 I. B. Cox, Val. Mueller Sur. No. 176. S.D. 368 ft.
Dan Short et al No. 1 J. G. Davidson, NW part of Lovie P. Moore Sur. S.D.R. 1,990 ft.
Southern Cross No. 1 Upton & Upton, Sec. 20, Blk. A, A.B.&M. Sur. Drlg. 5,153 ft.
Spinner No. 1 Reed, Mason Ferry Ranch Sur. S.D.O. 5,803 ft.; tools out of hole.

Yoakum County

W. A. Hudson No. 1 J. D. Webb, Sec. 545, Gibson Sur. Prep. P.B. 4,666 ft.
Shell Pet. No. 1 Waples-Platter, Sec. 616, Tstg. 5,380 ft.; hole fills at rate of 100 ft. per hr.; making 1 bailer of wtr. per hr.; P.B. 5,312 ft.; pmpg. 145 B.O. P.D., 30 per cent S.W.; prep. S.D. 5,312 ft.

TEXAS PANHANDLE

Armstrong County

Holmes, Newblock & Haley No. 1 Ed Moore, Sec. 319, Blk. 4-B, H.&G.N. Sur. Drlg. 865 ft.

Castro County

English et al No. 1 Gundlach, NW¼ Sec. 145, Blk. 6-M, S.K.&K. Sur. Loc.

Collingsworth County

Johnson No. 1 Taylor, Sec. 10-17, H.&G. N. Sur. T.A. 875 ft.

Deaf Smith County

Uscan No. 1 Farwell, Sec. 18, Blk. 3, X. Sur. U.R. 5,626 ft.

Gray County

Products O. & G. Co. No. 1 Mason Davis, Sec. 23, Blk. 23-M, H.&G.N. Sur. Loc.

Lipscomb County

Phil O'Neil No. 1 J. Kock, NW SW Sec. 539, Blk. 43, T.&T.C. Sur. S.D. 480 ft.

Roberts County

E. J. Dunigan, Jr., No. 1 Ledrick, Sec. 34, Blk. C, G.&M. Sur. D.P. stk. 3,760 ft.; fsg. 3,770 ft.

Wheeler County

Smith Bros. No. 1 Ribble, Sec. 46, Blk. 5-A, H.&G.N. Sur. S.D. 2,710 ft.

E. C. TEXAS WILDCATS

Anderson County

R. H. Williamson No. 1 O. G. Rogers, Wm. Greenwood Sur., 6 mi. SW of Elkhart. Loc.

Angelina County

Ginter Bros. and Jones No. 6 Copes Hrs., J. Morin Sur., 3 mi. E of Diboll. Tstd. wtr. 2,190 ft.; rng. tbg.; S.O.

Ellis County

C. M. Beckner et al No. 1 H. A. Styles, A. Bullock Sur., 3½ mi. W of Maypearl. S.D. 660 ft.
Compton Oil Co. No. 1 M. L. Van Landingham, O. Wheeler Sur., 3 mi. E of Pluto. Loc.

Falls County

M. A. Hayes No. 1 D. G. Wooten, J. Powell Sur., 8 mi. SE of Zott. T.D. 1,833 ft.; prep. core ahead.
Jack Shaunfield No. 1 Bargonier, J. M. Graham Sur., SE of Chilton. T.D. 875 ft.

Fannin County

H. W. English No. 1 T. W. Ayers, J. D. Seales Sur. S.D. 310 ft.

Freestone County

Brothers Oil Co. No. 1 P. D. C. Ball, M. Rionda Sur., 5 mi. NW of Butler. Loc.
J. R. Bunn No. 1 Robinson, J. L. Bennett Sur., 4 mi. E of Streetman. Drlg. 80 ft.
W. H. Keeling No. 1 Bounds-Longbotham, R. B. Longbotham Sur. S.D. 30 ft.

Grayson County

John Grey No. 1 Freedman, W. S. Reeves Sur., 8 mi. NW of Denison. O.S. 1,357-59 ft.; S.D. 1,381 ft.; S.O.; tstd. S.W.; S.D.; W.O. 1,407 ft.
Jim McMurrey No. 1 Dr. T. J. Long, J. Garland Sur., 2 mi. S of Collinsville; 4,000-ft. test. S.D.O. 3,929 ft.
Prince Bros. No. 1 Williams, S. Nix Sur 2 mi. NE of Van Alystine. S.D. 1,173 ft.
Ross & Marshall No. 1 J. N. Taylor, W. Moore Sur., 8½ mi. NW of Denison.
Sinclair Prairie Oil Co. No. 1 M. Williams, R. Sowell Sur., 1 mi. SW of Collinsville. Rng. csg. to test; T.D. 4,517 ft.; P.B. 3,667 ft.

Henderson County

Richards & Holloway, Inc., No. 1 G. E. Murphy, J. M. Gardner Sur., 6 mi. SW of Mabank. T.D. 3,159 ft.; S.I. storage.
Tide Water-Seaboard-Humble No. 1 Lewis, J. K. Stokes Sur., 1 mi. N of Opelika. Drlg. 8,085 ft.
Tide Water-Seaboard-Humble No. 1 Scott, C. Robb Sur., 3 mi. SW of Opelika area. Drlg. 8,130 ft.

Hill County

A. V. Abernathy and L. N. Sanders No. 1 E. M. Farrell, M. Mata Sur., ¼ mi. NE of Mt. Calm. S.D. 935 ft.

Houston County

G. C. Dixon No. 1 W. Goodman, J. J. Thomas Sur., ¾ mi. E of Lovelady. T.D. 2,100 ft.

Kaufman County

Sam Knoerr No. 1 J. B. Hunter, P. Walker Sur., 5 mi. S of Trenton. S.D. 3,006 ft.
McGee No. 1 San Antonio Land & Cattle Co., E. Higdon Sur. R.U.
W. G. McGee No. 1 General American Life ins. Co., John Baker Sur., 6 mi. W of Mabank. T.S. 3,070 ft.; S.O.; bailing 3,093 ft.; S.D. 3,093 ft.
Tyler & Smith No. 1 Trinity farms, G. Crocher Sur., 3½ mi. SW of Mabank. Drk.

Leon County

Humble O. & R. Co. No. 1 L. Campbell, Wm. Little Sur., NE offset to No. 1 Jackson. Abd. loc.
Humble O. & R. Co. No. 1 W. Johnson, W. Little Sur., outpost to Humble-Harris area. T.D. 5,904 ft.; made S.W.; set retainer; drlg. plug.

Limestone County

Albert Baggett No. 1 J. L. Thompson, P. Varela Sur. S.D. 15 ft.
Zephyr Oil Co. No. 1 Carrie Peeples, R. Scott Sur., 1½ mi. SW of Tehucanna. Drlg. 1,000 ft.

Nacogdoches County

D. McDaniels No. 1 T. H. Seale, J. A. Cherino Sur., just outside of city limits of Cherino. S.D. 690 ft.

Rains County

McKinley & Hastings No. 1 McTaggart, B. Milder Sur., 1 mi. W of Emory. S.D. 720 ft.

Navarro County

Topaz Oil Co. No. 1 E. Trammel, R. Mathews Sur., 4 mi. NE of Bazzett. Pits.

Red River County

Kansas-Oklahoma Pet. Corp. No. 1 R. H. Ringwald, A. Moore Sur., 3 mi. W of Manchester. S.D.O. 450 ft.

Robertson County

J. E. Cox No. 1 Sandifer, H. Henry Sur., 3½ mi. SE of Franklin. Loc.

Rusk County

Golden Rod Drlg. Co. No. 1 Hall Wood, J. I. Sanches Sur., 1½ mi. NW of Salem. Cg. 3,998 ft.
Hamm & Bogges No. 1 W. G. Ross, J. McCune Sur., 3 mi. NW of Mount Enterprise. S.D. 2,946 ft.

Smith County

J. H. Thomason No. 1 J. W. Bartlett, R. H. Stewart Sur., ½ mi. SE of Jamestown. S.D. 2,004 ft.

Titus County

Superior Oil Co. No. 1 John Hargraves, S. B. Patton Sur., 8 mi. S of Mt. Pleasant. Drlg. 3,030 ft.

Trinity County

McApline No. 1 C. V. Dilley, J. Grissett Sur., 7 mi. N of Trinity. S.D. 2,340 ft.

Van Zandt County

F. A. Richardson No. 1-A B. C. Dodd, T. W. Hutchinson Sur., 2 mi. S of Grand Saline. Prep. rng. csg. 4,965 ft.

NORTH TEXAS WILDCATS

Archer County

A. H. Fraser No. 1 W. M. Coleman. Lot 56, Brazos Co. Sch. Ld., Sur. A-18. Drlg. 2,385 ft.
G. E. Kadane & Sons No. 1 J. Hemmi, Sec. 60, Clark & Plumb Sur., Blk. 3. T.D. 5,314 ft.; 6⅝-in. 5,150 ft.; S.L. 5,-174-5,220 ft.; retreated 10,000 gal. acd.; C.O.; tstg.
W. B. Omohundro No. 1 A. B. Peckham, Sec. 22, H.&T.C. Sur., Blk. 1. S.D.O. 5,072 ft.

Baylor County

British Am. O. P. Co. No. 1 F. C. Green "L," Sec. 8, H.T.&B. Sur. 6⅝-in. 3,130 ft.; perf. 3,060-65 ft.; S.O.&G.; tstg. after perf.; est. 25 B.P.D.; tstg.

Clay County

L. T. Burns No. 1 E. F. Calloway, Lot 9, Hopkins Co. Sch. Ld. Set surf.; W.O.C.
L. T. Burns No. 1 J. T. Pickett, W. W. Yearly A-745. R.U.R.
L. T. Burns No. 1 C. L. Wynn, H. Williams Sur. A-704. Drlg. 4,465 ft.; had S.S.O. 4,395-4,415 ft.; Schlumberger survey showed some sat.; S.D.O. 5,203 ft.
J. E. Farrell No. 1 C. P. Malone, Sec. 12, T.&N.O. Sur. A-828. Drlg. 5,110 ft.
Frabar-Hodges and Mid-Union Drlg. Co. No. 1 Mrs. R. C. Kinder, Lot 11, Clark & Plumb Sur., Blk. 2, S.D.O. 5,012 ft.
Staley Oil Co. No. 1 D. J. Percifield, Sec. 37, Belcher Sub. R.U.R.
Youngblood & Foree No. 1 Mrs. Ida Wynn, Sec. 2, T.&N.O. Sur. A-795. Loc.

Cooke County

Sinclair Prairie No. 10 J. M. Best, T. Toby Sur. A-1054. T.D. 5,643 ft.; P.B. 5,565 ft.; set 5½-in. 5,285 ft.; W.O.C.

Hardeman County

Amerada Pet. Corp. No. 1 W. M. Rice, Sec. 81, W.&N.W. Sur. Drk.
M. M. Cooke No. 1 Mrs. M. D. Norton, Sec. 3, E.L.R.R. Sur. Spud and S.D.

Jack County

Samuel Edelman No. 1 A. B. Griffith, S. Tollett A-1436 Sur. R.U.C.T.

Montague County

E. B. Madden No. 1 Smith, H. N. Baker A-49 Sur. Spudded.
Sinclair Prairie Oil Co. No. 1 Whaley, Sec. 16, B.B.B.&C. A-86. Sur. Drlg. 3,610 ft.

Wichita County

Hanlon-Buchanan, Inc., No. 1 Fassett & Tuttle "F," D.L.&C. Sur. A-596. 6⅝-in. 4,040 ft.; L.&O.S. 4,061-92 ft.; shot 155 qt.; tstg. est. 100 bbl.; C.O.; tstg.

Wilbarger County

Lawson & Leavell No. 16 W. T. Waggoner A. Sec. 109, H.&T.C. Sur., Blk. 14; 3,500-ft. test. S.D.O. 1,445 ft.

Wise County

H. Jackson No. 1 F. Neeley, Blk. 29, Matagorda Co. Sch. Ld. Spd. and S.D.
H. M. Muse No. 1 F. F. Kaker, Blk. 16, Matagorda Co. Sch. Ld. Pits.

Young County

Hull & Silk No. 1 H. N. Tucker, Sec. 180, T.E.&L. Sur. Drlg. 4,572 ft.

WEST CENTRAL TEXAS DISTRICT

Brown County

T. W. Allmon No. 1 Almeda Moore, Jesse Williams Sur. No. 144, Abst. 931. S.D.O. 1,375 ft.
Dan Hartzell No. 1 H. D. Browning, Blk. 31, Chas. Messer Sur. No. 127. S.D.R. 600 ft.
Lynn No. 1 Nesbitt Rice, M.E.P.&P. Sur., Blk. 25. S.D. csg. 950 ft.

Callahan County

Bayou Oil Co. No. 1 W. E. Jones, Sec. 84, Comal Co. Sch. Ld. Sur. Loc.
H. M. Black No. 1 J. R. Jones, J. Van Winkle Sur. No. 3. D.&A. at 775 ft.
J. W. Dobbs Oil Corp. No. 2 Finley, Sec. 75, Bayland Orphans Home Lds. Skd. rig 50 ft.; S.D.O. 1,052 ft.
F. & M. Drlg. Corp. No. 1 W. A. Ramsey, Sec. 2277, T.E.L. Sur. D.&A. at 727 ft.
S. Herndon No. 1 W. L. Toland, Sec. 27, Blk. 5, S.P.R.R. Sur. Drlg. 850 ft.
D. B. McCall No. 1 J. E. Woods, Sec. 127, Univ. Lds., Abst. 14. S.D.O. 2,-229 ft.
E. L. Thomas No. 1 Ramsey, Sec. 104, B.B.B.&C. Sur. S.D. with S.O. at 1,-270 ft.
T. Whittmer No. 1 I. N. Jackson, Sec. 15, E.T.R.R. Sur. Spdg.

Coleman County

Anzac Oil Corp. No. 5-C J. P. Morris, David Bredding Sur. S.D. 40 ft.
Cooper Oil Co. No. 1 J. P. McCord, Sec. 519, San Augustine Sur. Loc.

Concho County

Clymore Co., Inc., No. 1 Hill, J. Frederick Sur. P.B. 2,000 ft.; S.D.
Floyd Dodson No. 1 Robert Wilson, Thomas Green Sur. Mch.
National Resources No. 1 Armon, Sec. 105, Blk. 72, T.&N.O. Sur. S.D.R. 700 ft.

Eastland County

Aloco Oil Co. No. 1 J. W. Guy, Sec. 32, Blk. 1, H.&T.C. Sur. Loc.
R. R. Groce No. 1 J. M. Rush, Sec. 130, Blk. 3, H.&T.C. Sur. U.R. 747 ft.
W. T. Luton No. 1 R. Been, Sec. 13, Blk. 3, H.&T.C. Sur. S.D. 258 ft.
John L. Reeves No. 1 Jas. Weaver, Blk. 55, McLennan C.S.L., League 304. Drlg. 1,615 ft.
W. R. Ritchey No. 1 Weddington, Sec. 2054, T.E.&L. Sur. U.R. 2,760 ft.
W. A. Stiles No. 1 J. Lyerla, SE part of Ussury Sur. No. 20. Drlg. 1,201 ft.

Erath County

Wayne Chandler No. 1 Chandler, J. W. Moore Sur., Abst. 571. Fsg. 4,678 ft.
T. Gray No. 1 C. Young Hrs., NW cor. of Stephen Smith Sur., Abst. 682. Sp. and S.D.
T. G. Jackson No. 1 J. W. Taylor, Prater Sur., Abst. 1029, 4 mi. NE of Desdemona. Loc.

Fisher County

Frank Bennett No. 1-A Martin, Sec. 113, Blk. 1, H.&T.C. Sur. Prep. cg. 3,393 ft.; S.O.

Hamilton County

Wallace & Vickers No. 1 C. C. Lund, J. P. Bailey Sur. 51. S.D.O. 3,430 ft.

Haskell County

E. W. Marland No. 1 Cobb, Sec. 96, Blk. 1, H.&T.C. Sur. Drlg. 1,840 ft.

Jones County

J. L. Douglas No. 1 J. M. Blanton, SW cor. of S. L. Underwood Sur. No. 1. Drlg. 1,610 ft.
Ed. L. Evans No. 1 B. J. Crier, Sec. 8, B.A.L. Sur. S.D.O. 1,721 ft.; est. 10 B. O.P.D.; installing pump 1,721 ft.
Fain-McGaha Oil No. 1 J. H. Harris, Blk. 79, DeWitt C.S.L. Sur., 5 mi. W. of Akard pool. Drlg. 2,205 ft.
Gillespie et al No. 1 J. D. Samples, Sec. 45, Deaf and Dumb Asylum Lds. Drlg. 3,200 ft.
Gregg Oil Co. No. 2 Appling, SW¼ Sec. 32, B.B.B.&C. Sur. W.O.C. 2,638 ft.
E. C. Lawson No. 1 M. M. McNair, Lot 3, Blk. 5, Lawson Sur., 4 mi. SW of Lueders. S.D.O. 2,185 ft.
Noark et al No. 1 D. Southard, Sec. 8, D.&D.A. Sur., 2 mi. NW of Griffin pool. Drlg. 1,980 ft.
Phillips Pet. Co. No. 1 J. R. Montgomery, Sec. 5, Blk. 16, T.&P. Sur. Drlg. 1,980 ft.
Quality Prod. No. 1 Radford, SE¼ Sec. 20, Blk. 16, T.&P. Sur. Fsg. blt 1,800 ft.
S. B. Roberts Co. No. 1 C. Herndon, Sec. 6, M.E.P.&P. Sur., 2 mi. S of Anson. Drlg. 1,200 ft.
Shaheen & Keeler No. 1 Radford, between Sayles and Akard pools. U.R. 1,955 ft.
A. H. Tarver No. 1 A. S. Barkley, Sec. 54, Deaf and Dumb Asyl. Lds. Drlg. 2,579 ft.

Mills County

D. Lane No. 1 J. W. Spinks, J. Douglas Sur. No. 5. Drlg. 122 ft.

Nolan County

Green & Owens No. 1 Tipton, Sec. 43, Blk. 19, T.&P. Sur. Fsg. csg. 4,464 ft.

Palo Pinto County

Palo Pinto O. & G. Co. No. 1 A. P.

(Continued on Page 106)

Personal Paragraphs

JOSEPH SCHNEIDER, governing director of Delaware Oil Co., Ltd., London, and of Societe Commerciale des Produits du Petrole, Paris, is on a business visit to the United States.

LELAND E. FISKE, oil and gas valuation engineer for the income tax unit of the Treasury Department, was transferred July 1 from Washington, D. C., to the office of the internal revenue agent in charge in Dallas, Tex. Eight additional oil and gas valuation engineers expect to be sent from Washington to various field offices about September 1. This decentralization policy, which embraces engineers and a number of auditors, is expected to increase efficiency and save many taxpayers the expense of trips to Washington.

GUS PATTON, chief engineer of Indian Territory Illuminating Oil Co., with his office in Oklahoma City, is reported seriously ill.

D. B. MYERS, manager of exploration for Union Oil Co. of California for several years, has been appointed chief economic geologist in charge of all areas in which the company operates.

ART WALKER, secretary of the Interstate Oil Compact Commission and secretary of the Oklahoma state compact committee, has suffered ill health for several months and recently has been unable to go to his office.

CLAREL B. MAPES, secretary of the Oklahoma Petroleum Industries Committee, has figured out that the typical owner of a motor vehicle in Oklahoma works 10 days in each year to pay his federal, state, and local automotive taxes.

CAPT. T. RIEBER, chairman of Texas Corp., was a passenger on the Dixie Clipper's first transatlantic trip. Another was W. J. DONOVAN, formerly assistant attorney general of the United States and later counsel for the defendants in the Madison case.

L. C. MORGAN, consulting geologist of Wichita, Kans., has been named chairman of the American Association of Petroleum Geologists' business committee. The appointment was made by HENRY A. LEY, president of the association, at a meeting of the executive committee in Tulsa last week.

WILLIAM FRASER, deputy chairman of Anglo-Iranian Oil Co., London, was made a knight bachelor in recent birthday honors conferred by the king of England. Mr. Fraser, who has visited the United States and has many acquaintances in the oil business of this country, comes of a family long associated with the Scottish shale industry.

O. L. PETERSON, of George C. Peterson Co., is president of the newly organized Chicago Gasoline Jobbers Association, composed of distributors handling advertised branded products. HARRY BECK, of Friend & Beck, is vice president, and JAMES L. McMANUS, of Frank M. Fulton, Inc., is treasurer. The association will foster uniformity in trade usages and try to eliminate unfair and discriminatory practices.

MAJOR JOHN BRYCE SHAW, district land man for the Ohio Oil Co. in Wichita Falls, Tex., and president of the Wichita County chapter of the Reserve Officers Association, with Mrs. Shaw, is visiting the New York World's Fair.

GEORGE W. CUNNINGHAM, manager of the legal department of Shell Oil Co., Inc., in Tulsa, has been advanced to assistant to JOE T. DICKERSON, general manager of Shell's legal staff in St. Louis, Mo. PAXTON HOWARD, who was assistant to Mr. Cunningham, succeeds the latter as manager in the Mid-Continent area.

FRANK T. EGAN has resigned as secretary-treasurer of the Petroleum Association of Illinois to resume his former office as director of the Centralia (Ill.) Chamber of Commerce. He left the Chamber of Commerce post last April with the understanding that he would be absent long enough only to get the oil association into working order.

DR. IONEL I. GARDESCU, consulting geologist, left Houston, Tex., last week for New York, where he was to sail for Rumania, his native country. Doctor Gardescu formerly was an instructor in petroleum engineering at Texas A. and M. College and later was on the staff of Texas Co. He spoke before the Houston Geological Society last Thursday on "Miocene Production and Recovery in the West Columbia field in Brazoria County."

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The Quawpaw-Wichita Gas Co. has a mystery well in Section 21-28-4, in the Augusta area in Butler County, Kansas. It is believed to be an oil well, in sand about 2,450 ft. deep, although drilled for gas. It looks good for 50 bbl. a day, The Oil and Gas Journal's field man says. This may be the opening well of a new oil field, as Butler County, up to this time, has been outside the oil country.

A wild period of oil stock speculation is on in Calgary, Alta., even though the Dingman well is the only producer in Alberta.

Cleveland, Ohio, has a town-lot drilling boom in an exclusive residence section centering on Clifton Boulevard.

20 YEARS AGO

Because of a lack of shipping facilities from the Burkburnett field in Texas, about 10,000 bbl. of oil a day is being lost to owners.

Gasoline at filling stations in the Mid-Continent area averages about 22 cents per gallon. There is no tax.

Efforts are being made to unionize oil field and refinery workers. Organizers are busy from West Virginia to the Rocky Mountains.

10 YEARS AGO

Charles R. Krause is elected president of Lee C. Moore & Co., Inc.

Minneapolis, St. Paul and Chicago are promised natural gas from the Texas Panhandle by the pooling of the gas interests of Phillips Petroleum Co., Skelly Oil Co. and Columbia Carbon Co. The new company will be known as the Central States Natural Gas Co.

All the stock in the Josey Oil Co., headed by R. A. Josey, has been purchased by the Texas Co.

W. F. CHISHOLM, engineer for the Louisiana State Department of Conservation, is on a business trip to San Francisco.

R. B. FIELDS, drilling contractor and producer of Houston, Tex., was called to Kansas City, Mo., last week by the death of Mrs. Fields' mother.

C. H. THIGPEN, engineer for the Arkansas Oil and Gas Commission, who has been indisposed, has gone to Battle Creek, Mich., for treatment. He expected to be away for about a month.

S. M. GLADNEY, JR., district landman for Sun Oil Co. in Tyler, Tex., has been moved to Dallas to occupy the office of J. H. PRESSLEY while the latter recovers from illness in a Dallas hospital.

OAKAH L. JONES, assistant secretary-treasurer of Oklahoma Natural Gas Co., was elected president of the Tulsa Institute of Governmental Research at a board meeting held last Thursday.

ROBERT W. McDOWELL, vice president in charge of marketing of Mid-Continent Petroleum Corp., is back at his home in Tulsa following a tour of Europe. He visited England, France, and Switzerland.

KENNETH M. WILLSON, chief geologist of Mid-Continent Petroleum Corp., Tulsa, has gone to San Antonio, Tex., to take personal charge of work which the company is doing in that area. He will remain until completion of the development program.

HARRY M. RYDER, of Ryder-Scott Co., Bradford, Pa., has returned from a vacation trip to Haiti.

DR. G. O. EBREY, chief chemist for Pennzoil Co., Oil City, Pa., has received a Gulf Oil Corp. fellowship at the Mellon Institute, Pittsburgh.

H. R. CULLEN, president of Quintana Petroleum Corp., Houston, Tex., planned to leave early this month on a summer vacation tour in Alaska, accompanied by his family.

GEORGE HILL, of Hill & Hill, Inc., Fort Worth, Tex., left for a vacation trip which will take him to Colombia, South America. He will return by way of California about August 15.

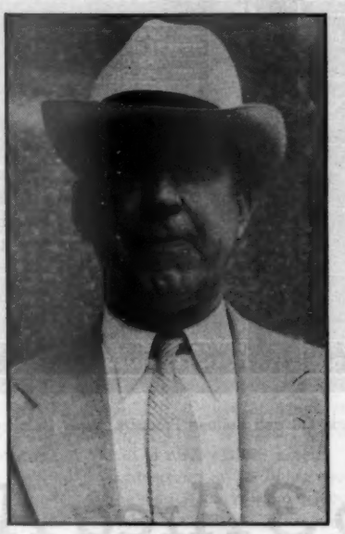
WILLIAM H. MONTGOMERY, resident manager of the Standard Oil Co. of New Jersey at Palembang, Sumatra, Dutch East Indies, was the speaker at the luncheon meeting of the Kiwanis Club in Oil City, Pa., last week.

C. M. REED, who was assistant division manager of the Fort Worth, Tex., division of Continental Oil Co., became July 1 manager of the company's new Gulf Coast marketing division, with headquarters in Houston, Tex. FRANK G. BETTIS is assistant manager. Mr. Reed joined Conoco in 1927 and Mr. Bettis in 1928.

J. W. (JACK) HERBERT, independent operator of Fort Worth, Tex., sailed from Montreal, Canada, Saturday with Mrs. Herbert on a boat trip which will take them down the Atlantic Coast, through the Panama Canal, to Los Angeles, Honolulu, Alaska, San Francisco, back by way of the canal to points in Mexico, Havana, and to the New York fair, returning to Fort Worth about September 1.

Distinctions Are Many

Elevation last week to imperial potentate of the national Shrine is not the only distinction that has come to Walter D. Cline, Wichita Falls, Tex., independent oil operator. For instance, he drilled the discovery well which started the spectacular development in Northwest Texas. He has been mayor of Burkburnett, mayor of Wichita Falls and he has been a subject of serious discussion in connection with the governorship of his state. He received decorations from the kings of Belgium and of England for war-time services.



WALTER D. CLINE

Born in Louisiana, young Cline attended Centenary College, Shreveport, which later conferred upon him the degree of doctor of laws. While a resident of Burkburnett he donated the 5-acre plot on which the town's high school stands. He moved to Wichita Falls in 1917 and has been a leader in every important civic undertaking. During the World War Mr. Cline headed liberty loan campaigns and emergency drives. He was one of the commission of seven from Texas on the Federal Fuel Advisory Board and served as field director of the Red Cross. He was on the Boy Scouts national council, and in 1932 his tireless devotion to welfare and other projects gained for him the Ad Club's loving-cup as Wichita Falls' most valuable citizen of the year. Masonic enterprises have drawn on much of his time. He was the first president of the Texas-Louisiana division of the Mid-Continent Oil and Gas Association. He is active in the Methodist Church.

C. F. SABOURIN, assistant manager of Lago Petroleum Co., arrived in the United States June 26.

BONNEAU PETERS, Shreveport, La., chief scout of Standard Oil Co. of Louisiana, accompanied by his family, left for a vacation trip in the East, to include the World's Fair in New York.

GUY E. STELLER has been elected secretary of the Southern Counties Gas Co., Los Angeles, succeeding the late E. C. Cox. W. J. McCOY was elected to the board of directors.

H. E. BREMER, geologist in the Shreveport, La., office of Texas Co., is spending his vacation visiting his old home in Wisconsin. GEORGE M. CLEMENT, another member of the staff, has returned from a vacation trip to Nebraska.

E. I. HANLON, chairman of Hanlon-Buchanan, Inc., Tulsa, and chairman of the National Bank of Tulsa, has gone to San Francisco, from which point he will sail for a tour of oriental and European points occupying several months.

C. R. DOOLEY, industrial relations manager of Socony-Vacuum Oil Co., Inc., will preside at the Silver Bay Industrial Conference August 30 to September 2 at Lake George, N. Y. This will be the twenty-second annual conference on industrial relations conducted under the auspices of the industrial service of the National Council of Y.M.C.A.'s.

JOHN CANNING, JR., member of Standard Oil Co. (Indiana) public relations department, Chicago, won third place in the current Marshall Field photographic salon. The picture, taken last winter from the Standard Oil Building in Chicago, was of snow-bound Michigan Avenue and it was widely published in newspapers throughout the country.

GEORGE BELL, LEONARD THOMPSON, and JIM WHITTEN, of Guthrie; ALLEN MACKLIN and CHARLES BROWN, of Stillwater; J. N. GRAY, of Ardmore; M. L. BILLS, of Garber, and ROY FRANKLIN, of Oklahoma City, are the drillers from Oklahoma running tour on the drilling well which forms a feature of the petroleum exhibition at the New York World's Fair.

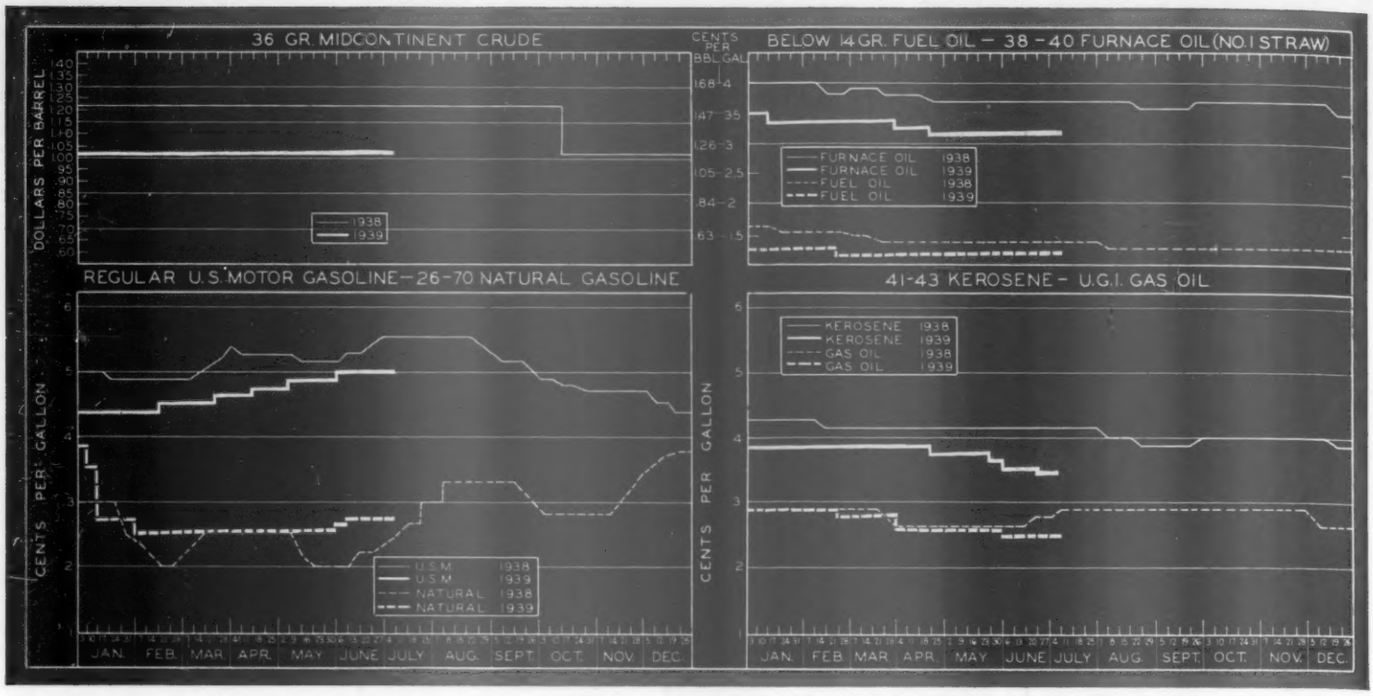
SHIFTS: W. H. HAINES, district manager sales Standard Oil Co. of California, from Sacramento, Calif., to Los Angeles, Calif.; CHESTER WILLIAMS, president Payco Petroleum Co., from Stillwater, Okla., to Kansas City, Mo.; WILLIAM S. PIKE, JR., geologist Shell Petroleum Corp., from Many, La., to Nacogdoches, Tex.; R. H. LUDEMAN, purchasing agent Anglo-American Purchasing Co., Inc., from Larchmont, N. Y., to New York; IRVING WHEATCROFT, from Toronto, Ont., Canada, to London, England; H. A. FARLEY, president Pawnee Oil Production Co., from Tucson, Ariz., to Tulsa; LUKE SIMS, president Fields & Sims Co., Inc., from Fort Worth, Tex., to Mount Vernon, Ill.; R. C. FARLEY, engineer Ohio Oil Co., from Henderson, Tex., to Jefferson, Tex.; JOSEPH K. McINTOSH, engineer Texas Co., from Port Arthur, Tex., to Amarillo, Tex.; J. L. TRACY, superintendent Homestead Oil & Gas Co., from San Angelo, Tex., to Fort Worth, Tex.; W. R. KENNEDY, engineer the Texas Co., from Wichita Falls, Tex., to Nocona, Tex.

LEWIS E. PIERSON, honorary chairman of the Irving Trust Co., New York, was elected a director of Shell Union Oil Corp. last week. He succeeds GAYER DOMINICK, who resigned from the board because of press of other duties.

L. P. ST. CLAIR, president of Independent Oil Producers Agency, who recently resigned as chairman of the board of Union Oil Co. of California after service of 30 years, was honor guest at a testimonial dinner given last week by the wildcat committee of the California Oil and Gas Association and sponsored by the board of directors of the association. J. R. PEMBERTON, chairman of the wildcat committee, was toastmaster, and FRANK A. MORGAN, vice president of Richfield Oil Corp., presented a silver cigaret box engraved with the signatures of all present.

L. H. WENTZ, who recently sold the last of his producing properties in Oklahoma, took occasion last week to deny reports that he was planning to leave that state. He said he was operating various properties at a loss, but that he was keeping men at work, helping to keep living standards high and hoping for an upturn in business. This widely known wildcatter has maintained an office for 10 years in San Antonio, Tex. His home is in Ponca City, Okla.

T. J. DONOGHUE, executive vice president, and G. L. NOBLE, vice president of Texas Co., and P. C. SCULLIN, vice president and general manager of Indian Refining Co., a Texas subsidiary, retired last Saturday from active service. Along with 15 other employes who retired on the same date they were honor guests at a luncheon given by the Texaco Circle at the Texas State Hotel, in Houston. DONALD REIN, principal speaker, told the veterans they had years of service to the community before them. A luncheon meeting of the Houston Kiwanis Club, at which cowboy songs and outfits provided color, was dedicated to Mr. Noble, a charter member.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Refiners in Group 3 Area Are Uneasy Notwithstanding Favorable Factors

By T. F. SMILEY

Although important requisites for a profitable gasoline market were visible in the Group 3 area this week, tankcar prices exhibited a drooping tendency, and comment of refiners was tinged with uneasiness. Shipments, stimulated by holiday demand, had stepped up; consumption was mounting, and Texas crude stocks had recorded a smashing drop. But over against these favorable factors were persistently heavy gasoline stocks, excessive runs to stills, overproduction of crude in Illinois, disjointed tank-wagon and retail markets, and increasing offerings by refiners in need of outlets.

Refiners More Nervous

Disappointment over failure of the Sinclair Refining Co.'s recent advances in tank-wagon prices to hold their ground in various regions was still keen; for these higher prices, in force scarcely a week before they were withdrawn at many points for lack of support, had raised hopes of better refinery prices. No changes of consequence in the tank-wagon situation were reported, but refiners were manifesting more nervousness about it than jobbers. Since the partial breakdown of the advanced tank-wagon quotations buyers apparently were having less difficulty in getting concessions, and many refiners were redoubling their efforts to reduce inventories, evidently fearing a general markdown.

Jobbers, however, protected by minimum-margin contracts, did not face such discouraging possibilities. Increased tank-wagon prices enlarge the jobber's margin of profit so long as tankcar prices do not rise in the same amount; but whether tank-wagon prices go up or down, the jobber is sure of getting at least the margin named in his contract with the refiner. So while jobbers saw no reason for filling their storage tanks at current quotations, they saw no reason for panic either.

While most sales managers expressed dissatisfaction with the character of the gasoline market, a few voiced cheerful determination. "Our June business surpassed that of May and that of June 1938," said one; and he added, "We're getting our prices too." Referring to the weak kerosene market, he remarked, "We're simply refusing to make concessions. We're getting the published prices for what we sell, and we're storing the rest."

Rainy weather throughout much of the midwestern territory prevented wider use of cars and kept gallonage from going to bigger figures.

Natural gasoline was gaining under the stimulus of increasing export business. Inquiries were coming in substantial volume, and most of them were translated later into orders. A large proportion of the natural going oversea is blended with crude. Foreign governments that impose a tax on imported oil products usually allow crude to come in free of duty. As crude is known to lose part of its volatility in the processes of production, transportation, and loading on boats, some of these governments allow an addition of 5 to 7 per cent of natural gasoline to restore this volatility.

Stocks Well Cleaned Up

Current purchases were keeping the natural gasoline market pretty well cleaned up. No surplus inventories were reported in either Oklahoma or Texas.

Heating oils were soft, with offerings plentiful. Refiners who do not have storage facilities were in no position to be fussy about prices, and concessions were reported easily obtainable. The strongest item in the list of light fuels was the No. 2 32-36 straw, demand for which was in balance with supply.

Bright stocks and neutrals showed no change, and they are expected to show little during the ensuing summer.

Refined Oil Market Barometer

Gasoline market generally firmer, with no further recessions of consequence from the higher level of tank-wagon prices established in mid-June. Movement to consuming points has risen sharply; but topheavy inventories, especially in interior areas, with other unfavorable conditions, are impairing market strength. Light fuels soft, though there is active buying for fall.

MID-CONTINENT. Gasoline steady. Naturals firm. Heating oils soft.

EAST COAST. Gasoline firm. Industrial fuel oil and Bunker C strong. Wax steady.

GULF COAST. Gasoline steady. Gas oils firm. General market sluggish.

CALIFORNIA. Gasoline and lubricating oils benefiting from rising motor travel.

PENNSYLVANIA. Gasoline steady. Wax inventories increasing, but prices firm.

CHICAGO. Gasoline strengthened by holiday demand. Heating oils dull.

Gains in Gasoline Market Seem Established on East Coast

By H. STANLEY NORMAN

NEW YORK, July 3.—The middle-of-June motor fuel market gains appeared last week to have been definitely established, although the full extent of the half-cent increase posted by Sinclair Refining Co., its marketing subsidiaries and others, was not realized in all instances.

Just prior to the July Fourth holiday, probably the summer's heaviest day of consumption, the northeastern territory appeared to be on a firm market foundation, although the middle-of-June advances in New York and New England did not average more than three-tenths of a cent per gallon on tank-wagon deliveries. Failure of the refining industry to effect a more impressive liquidation of motor fuel stocks during May and June appears to be the only reason that gasoline prices have not advanced at a more rapid rate. Consumption is hitting new peaks in practically all sections of the country, but is particularly concentrated within a 100-mile radius of New York and San Francisco where the two expositions are pulling tourists.

Preliminary indications were that last week's motor fuel stock liquidation of approximately 924,000 bbl. will be surpassed for the week ending July 1 by perhaps as much as 250,000 or 500,000 bbl. Tank-wagon and tankcar shipments of motor fuel into consuming channels were reported exceptionally heavy during the final week of June in preparation for the holiday which was stretched by many car owners to cover Saturday, Sunday, Monday and Tuesday. The call on refiners during the current week will probably keep pace with the preceding 7-day period because of the necessity for replenishing depleted terminal and bulk plant stocks. There were no significant market moves during the past week. Most of the local and regional adjustments to meet prices of the market leaders set during the third week in June had been made previously.

Downward adjustments at three New England points, made during the first half of June, were reported by Socony-Vacuum Oil Co., Inc., last week. The tank-wagon price was lowered a tenth of a cent at Manchester, N. H., and 1 cent at Burlington, Vt., on June 13. The tank-car price was lowered two-tenths of a cent per gallon at Worcester, Mass., June 9. The New England adjustments were the result of price-cutting generally in the Boston area which eventually spread to several other points in direct competition. Tankcar gasoline is practically unchanged along the northeastern seaboard. Due to the widespread sale of third-grade gasoline in Brooklyn and other competitive factors including the difficulty of dealers in meeting competition, Socony-Vacuum Oil Co., Inc., announced June 29 that it was suspending its maintenance contracts under the Feld-Crawford act on resale prices in Kings County. There was no change reported in the tank-wagon price in Kings County accompanying abandonment of the resale price contracts.

Eastern refiners and terminal operators are generally quoting 6¼ cents per gallon for 65-octane material, although some offerings are reported at 6 cents for the low of the range and 6⅜ cents for the high. The tankcar market at most eastern seaboard points appears to be approximately an eighth of a cent higher than during the first part of June, although the relation between this advance and the tank-wagon increase is difficult to trace.

A minimum of 5¼ cents per gallon for 70-octane motor fuel appears reasonably well established on the Gulf Coast among cargo suppliers. Two cargoes were involved in late June and July purchases at 5¼ cents although some refiners short on motor fuel are quoting 5½ cents per gallon. Purchasers on the East Coast report no particular trouble in obtaining offerings from Gulf Coast plants at 5¼ cents for 70-octane if they are willing to take leaded material. Motor fuel meeting 70-octane specification unleaded is more difficult to locate and generally commands from an eighth- to a quarter-cent per gallon higher price.

Kerosene followed routine lines last week with most suppliers asking 4¼ cents per gallon. Business could be done at slightly lower prices in the spot market with terminal operators obtaining supplies from the Gulf. However, Gulf Coast refiners were reported inclined to quote 3⅝ cents for 41-43 water white material. Some material is still available at 3½ cents on the Gulf but there are fewer plants willing to consider current business on this basis than prevailed during the first part of June.

Industrial fuel oil and Bunker C material continues as one of the strongest refinery products in the entire market. Rumors were heard in New York late last week that some suppliers had dropped back from 80 cents per barrel on the Gulf to 78 cents. On the other hand, one refiner who had been quoting 79 cents per barrel for cargo quantities of heavy fuel oil said he was now asking 80 cents in line with the general market. The supply situation on the Gulf remains extremely tight and it is doubtful that the current market of 80 cents can be shaded extensively or to cover more than small cargo shipments. The Bunker C fuel oil market at New York Harbor refineries and terminals remains firm at $1.05 per barrel, although shore plant deliveries of No. 6 fuel are reported to have slumped slightly from the tank-wagon quotation of 3⅛ cents per gallon established by some suppliers three weeks ago when stocks were practically unobtainable. A few scattered tank-wagon offerings of No. 6 fuel oil for as little as 2.6 cents per gallon were reported but a check on this business could not be obtained.

Although the production of No. 5 fuel oil is strictly limited since a majority of refiners have narrowed their output to about three grades the material was said to be commanding higher prices along the Atlantic seaboard. Prices for No. 5 fuel oil at New York, Philadelphia and Baltimore were reported at $1.25; at Boston, $1.35 and at Providence, R. I., $1.30 per barrel.

No. 2 fuel oil on the Gulf Coast at 3 to 3¼ cents per gallon appears to have touched bottom.

Although stocks of wax in the hands of eastern and Pennsylvania refiners are larger, the market is well sustained for most scale grades at a range of 2.85 to 3 cents.

The market for lubricating oils is unchanged from the past 2 or 3 weeks. Neutral oils range from 14½ to 19½ cents per gallon, depending on viscosity and pourpoint, and western Pennsylvania bright stocks are quoted at 15½ to 19½ cents, depending on pourpoint specification.

Western Pennsylvania refiners reported that kerosene demand had slumped off slightly but the price of 4⅞ to 5 cents per gallon for 45-gravity material is unchanged.

One Gulf Coast mixed cargo of gas oil and kerosene was reported sold for July loading. The gas oil of 53 Diesel index brought 3⅜ cents per gallon for 20,000 bbl. and 30,000 bbl. of kerosene were sold at 3½ cents per gallon.

A. P. I. Weekly Refinery Statistics

REFINERY FIGURES FOR THE WEEK ENDED JULY 1 NOT AVAILABLE DUE TO INDEPENDENCE DAY HOLIDAY

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ending June 24, 1939	272,297,000 barrels
Week ending June 17, 1939	274,852,000 barrels
Week ending June 25, 1938	293,463,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of July 5, 1939

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank-wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	15.1	13.6	4.0	10.0
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	13.6	4.0	10.0
Quincy	14.9	13.4	4.0	9.8
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	9.4
Minneapolis	16.5	15.0	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.8
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	13.6	12.1	4.0	7.1
Grand Rapids	14.5	13.0	4.0	9.7
Saginaw	15.8	13.6	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	15.3	5.0	†10.7
South Bend	17.1	15.6	5.0	†10.0
Fargo, N. D.	16.7	15.2	4.0	11.6
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	8.0
St. Louis*	14.7	13.2	4.0	8.0
St. Joseph	14.4	8.9	4.0	7.9
Wichita, Kans.	13.9	11.6	4.0	7.4

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective June 1, 1939, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gallons, 9 cents; 100-149 gallons, 8 cents; 150 gallons and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex furnace oil, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex Grade A, 1-399 gallons, 5 cents; 400 gallons and over, 4 cents. Stanolex Grade B, 1-799 gallons, 5 cents; 800 gallons and over, 4 cents. Stanolex Grade C, 1-999 gallons, 4.25 cents; 1,000 gallons and over, 3.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Gasoline Di-vided dlr.	Gasoline Inc. tax	Kero. tank-wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	10.9	12.7	4.0	7.0
Newark	10.9	12.7	4.0	7.0
Annapolis, Md.	12.85	14.35	5.0	9.5
Baltimore	12.25	13.75	5.0	7.0
Cumberland	13.65	16.15	5.0	10.0
Wash'gton, D. C.	10.50	12.0	3.0	9.5
Danville, Va.	14.45	16.95	6.0	12.9
Norfolk	13.25	15.75	6.0	11.5
Petersburg	13.55	16.05	6.0	11.7
Richmond	13.55	16.05	6.0	10.7
Roanoke	14.75	17.25	6.0	11.0
Charles'n, W. Va.	14.05	16.55	6.0	12.6
Parkersburg	13.35	14.85	6.0	11.2
Wheeling	14.35	15.75	6.0	12.2
Charlotte, N. C.	15.40	17.90	7.0	11.8
Hickory	15.95	18.45	7.0	12.3
Mt. Airy	15.80	18.50	7.0	12.2
Raleigh	15.15	17.65	7.0	11.5
Salisbury	15.45	17.95	7.0	11.9
Charleston, S. C.	14.25	16.75	7.0	10.6
Columbia	15.25	17.75	7.0	11.6
Spartanburg	15.95	18.45	7.0	12.4

Price basis to Essolene undivided dealers: Dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gallons or more, consumer tank-wagon price. Single deliveries of less than 50 gallons, 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less .5 cent per gallon. The above policy also applies in South Carolina effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Cons'r. tank-wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	17.5	7.0	9.0
Augusta	19.5	16.5	7.0	9.0
Macon	18.5	15.5	7.0	10.0
Savannah	18.5	15.5	7.0	8.0
Birmingham, Ala.	20.5	17.5	8.0	8.5
Mobile	20.5	17.5	9.0	8.5
Montgomery	21.5	18.5	9.0	10.5
Jackson, Miss.	18.5	15.5	7.0	9.5
Vicksburg	18.5	15.5	7.0	9.0
Jacksonville, Fla.	19.5	16.5	8.0	8.0
Miami	19.5	16.5	8.0	8.0
Pensacola	20.5	17.5	9.0	8.0
Tampa	19.5	16.5	8.0	8.0
Lexington, Ky.	19.0	16.0	6.0	10.0
Covington	17.5	14.5	6.0	9.5
Louisville	18.0	15.0	6.0	9.0
Paducah	18.0	15.0	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.0
Pittsburgh	13.0	14.5	5.0	10.5
Allentown	12.5	14.0	5.0	10.5
Erie	13.0	14.5	5.0	10.0
Scranton	12.5	14.0	5.0	10.5
Altoona	13.0	14.0	5.0	10.5
Dover, Del.	...	14.0	5.0	10.5
Wilmington	...	13.5	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Albany	11.7	14.0	5.0	7.00
*Met. N. Y.:				
Manhat., Bronx.	11.8	13.0	5.0	6.75
Queens, Br'klyn	11.8	13.0	5.0	6.75
Staten Island	11.8	13.0	5.0	6.75
Buffalo	12.4	11.8	5.0	7.50
Rochester	12.6	14.0	5.0	7.75
Syracuse	12.3	13.6	5.0	7.25
Boston	10.7	12.25	4.0	6.50
Portland, Me.	11.7	13.7	5.0	6.75
Manchester, N. H.	12.4	14.4	5.0	7.25
Burlington, Vt.	12.2	13.5	5.0	7.25
Springfield, Mass.	11.4	13.3	4.0	6.00
Worcester	11.2	12.5	4.0	7.00
Hartford, Conn.	11.1	13.2	4.0	6.50
New Haven	11.0	12.25	4.0	6.00
Providence, R. I.	10.7	12.50	4.0	6.50

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and New England points for tank-wagon delivery to the following: Annual purchases 10,000 gallons and under, tankcar price plus 2 cents per gallon; annual purchases 10,000 gallons up to 50,000 gallons, tankcar price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gallons, tankcar price plus 1 cent per gallon; annual purchases 200,000 gallons and over, tankcar price plus one-half cent per gallon. Private consumers pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gallons receive a discount of one-half cent per gallon.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-truck	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nev.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle ,Wash.	20.0	21.0	6.0	†13.75
Spokane	21.5	22.5	6.0	†16.75
Tacoma	20.0	21.0	6.0	†13.75

*Includes 5-cent state tax. †Includes .25-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

March 18, 1939, split dealer discount was canceled.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Gasoline Dlr.	Gasoline Incl. tax	Kero. tank-wag.
Denver, Colo.	15.5	...	5.0	11.5
Grand Junction	18.0	...	5.0	15.0
Pueblo	16.0	...	5.0	9.0
Casper, Wyo.	17.0	...	5.0	11.5
Cheyenne	15.0	...	5.0	13.0
Billings, Mont.	18.0	...	6.0	13.0
Butte	19.5	...	6.0	15.5
Great Falls	19.0	...	6.0	15.5
Helena	20.0	...	6.0	15.5
Salt Lake, Utah	17.0	17.0	5.0	16.0
Boise, Idaho	20.1	20.1	6.0	18.0
Twin Falls	20.6	20.6	6.0	18.0
Albu'que, N. M.	17.0	17.0	6.5	10.0
Roswell	15.5	15.5	6.5	8.0
Santa Fe	17.5	17.5	6.5	10.0

*Includes city tax of .5 cent. †Includes state tax of 1 mill.

Tank-wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
New Orleans, La.	16.75	19.25	*10.0	†11.0
Baton Rouge	14.75	17.25	8.0	‡10.5
Alexandria	14.75	17.25	8.0	‡12.5
Lafayette	15.00	17.50	8.0	‡11.0
Lake Charles	14.75	17.25	8.0	‡12.5
Shreveport	13.50	16.00	8.0	‡11.0
Knoxville, Tenn.	18.00	20.50	8.0	14.5
Memphis	16.00	18.50	8.0	11.0
Chattanooga	17.50	19.00	8.0	14.0
Nashville	17.00	19.50	8.0	12.0
Bristol	18.25	17.00	8.0	13.0

Essolene at dealer price less .5 cent per gallon to undivided dealers.

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gallons, consumer tankcar plus 2 cents per gallon; 50 to 199 gallons, consumer tankcar plus 1 cent per gallon; 200 gallons and over, consumer tankcar plus .5 cent per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank-Wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Omaha	17.5	16.0	6.0	10.5
McCook	17.0	15.0	6.0	9.0
Norfolk	17.0	15.9	6.0	9.0
North Platte	18.3	16.8	6.0	11.1
Scottsbluff	18.0	15.9	6.0	11.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Gasoline Includes tax	Kero. tank-wag.
Texarkana, Ark.	14.0	5.0	8.0
Fort Smith	14.0	5.0	7.5
Little Rock	16.75	7.5	8.0
Muskogee, Okla.	13.0	5.0	7.0
Oklahoma City	13.0	5.0	6.5
Tulsa	13.0	5.0	7.0

The tank-wagon price is the price to all classes of trade.

Texas

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. wag.
Dallas, Tex.	14.0	18.0	5.0	7.0
Fort Worth	15.0	19.0	5.0	8.0
Houston	14.0	18.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	23.5	10.0	17.5
St. John, N. B.	23.0	10.0	17.5
Montreal, Que.	22.0	8.0	14.5
Toronto, Ont.	23.0	8.0	15.5
Hamilton, Ont.	23.0	8.0	15.5
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.9
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta.	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. (Nebraska) June 28 reduced tank-wagon gasoline 1 cent in McCook.

Socony-Vacuum Oil Co., Inc., June 9 reduced consumer tankcar gasoline .2 cent in Worcester; June 13, reduced dealer tank-wagon gasoline .1 cent in Manchester and 1 cent in Burlington; May 26, advanced tank-wagon kerosene .25 cent in Burlington.

Pennsylvania Oil Handbook

The Pennsylvania Oil Salesman's Handbook, a 48-page volume just issued by the Pennsylvania Grade Crude Oil Association, Oil City, Pa., is designed to afford salesmen information on products. Part 1 answers query, "Why sell Pennsylvania oils?" Part 2 tells how to sell them. "You may not get any good out of reading it," says the foreword, "but we'll guarantee it won't do you any harm, which is more than we can say about some of the drivel we have seen published on the subject of selling. . . . Most of this material is stolen from other sources; we've done what most writers on salesmanship do, only we won't lie about it."

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 5, 1939

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼
64-66 375	.04¼	.04⅜
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼
60-62 400	.04¼	.04⅜
64-66 375	.04¼	.04⅜

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below	.04⅜	.04⅝
67-69 octane	.04⅞	.05

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05¼
64-66 375	.04¼	.04⅜
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.04½	.05
65 octane	.06¼	.06⅜
68-70 octane		.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06½	.08
58-60 400, 65 oct. and higher	.07½	.09

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06	.06¼
Philadelphia	.06	.06¼
Baltimore	.06	.06¼
Charleston, S. C.	.06½	.06¾

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.04¼	.04⅜
60-64.9		.04½
65 octane and higher	.05½	.05¼
68-70	.05½	.05½

Naphtha

PENNSYLVANIA (inland refineries)—

52-56 450 (blending)	.04¼	.04⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02¾
Grade 18-55		.03¼

NORTH TEXAS—

Grade 26-70		.02¾
Grade 18-55		.03¼

CALIFORNIA—

75-85 375-390	.06	.06¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.03⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110-flash, 540-550 e.p.	.03⅜	.03⅝
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.03½	.03¾
46-48 gr., 210-230 i.b.p., 480-max., e.p.	.03⅞	.04⅛

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅜	.03⅝
42-44	.03⅝	.03⅞

NORTH TEXAS—

41-43	.03⅜	.03⅝

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.03¾	.04

ARKANSAS (Ark. and N. La. del.)—

41-43		.04¼

PENNSYLVANIA (inland refineries)—

45	.05	.05⅛
46	.05⅛	.05¼
47	.05¼	.05⅜

CHICAGO (Based on Group 3)—

41-43	.03¾	.03⅞
42-44	.03⅞	.04

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.05¾

NEW YORK (Bayonne, N. J.)—

41-43		.04⅜

***GULF COAST (domestic)—**

41-43		.03½

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03⅜	.03½
No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03¼
No. 2 straw, 32-36	.02¾	.03
No. 2 dark, 32-36	.02⅝	.02¾
No. 3 zero to 15, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅜	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03⅛	.03¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36		.03

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅜

CHICAGO (Based on Group 3)—

Range oil	.03⅝	.03⅞
No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½
No. 2 straw, 32-36	.03¼	.03⅜
No. 2 dark, 32-36	.03⅛	.03¼
No. 3, zero to 15, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02⅝	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1	.04	.04¼
*No. 2		.03⅝
*No. 4		.03⅜

*Barge deliveries ⅛ to ¼ cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4 low pourpoint, 24-28	.90	1.00
No. 4, 15 and above, 24-28	.80	.90
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, low pourpoint, 24-28	.90	1.00
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02¾
No. 4, low pourpoint, 24-28	1.00	1.05
No. 4, 15 and above, 24-28	.85	.90
No. 5, low pourpoint, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pourpoint, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04¾

CALIFORNIA—

Los Angeles:

30-40 gas oil, per bbl.	1.10	1.30
24 plus Diesel, per bbl.	.80	1.15
24 plus Diesel (bunkers)	1.15	1.30
12-16 (bunkers at tidewater)	.70	.90
10-16 (cargo lots)	.60	.80
12-17 (tankcars)	.50	.90
10-17 (high sulfur)	.45	.85

San Joaquin Valley:

10-18 (tankcars)	.50	.75
24 plus Diesel, per bbl.	.90	1.20

San Francisco:

24 plus Diesel, per bbl.	1.30	1.45
24 plus Diesel (bunkers)	1.35	1.55
10-16 (bunkers)	.90	.95

GULF COAST—

No. 2 fuel	.03½	.03¼
43-47 Diesel		.03½
48-52 Diesel	.03¼	.03½
53-57 Diesel	.03⅝	.03½
Bunker C (bulk cargoes)	.77	.80
Bunker C (bunkers)	.80	.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.03¾
28-30 Diesel (lighterage 6¼c per bbl.)		1.65
28-30 Diesel (tankcars)	.04	.04¼
Bunker C (to ocean-going ships in N. Y. Harbor)		1.05
Industrial fuel (tankcars)		.03¼

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14¼	.16
150-160 D, 15-25	.13½	.15½
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12½
600 dark green (untreated)	.04½	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):

10 pourpoint	.18	.18½
15 pourpoint	.17	.17½
25 pourpoint	.15½	.16
Steam refined:		
600	.08½	.10
650	.10½	.11
600 flash	.11	.12
630 flash	.13½	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

150-3		.09
180-3		.10
180-4		.09½
200-3		.10⅛
200-4		.10
250-3		.11⅛
250-4		.11
280-3		.12⅛
280-4		.12
300-6½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 pourpoint:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.12½

GULF COAST—

Pale oils:

200-3	.07	.07⅛
300-3	.07⅛	.07¼
500-3½	.08⅛	.08¾
750-3½	.08⅝	.09⅛
1,200-3½	.09⅛	.09¾
1,500-4	.09¾	.10
Red oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08⅛
750	.08¾	.09
1,200-5-6	.09¼	.09⅜

CALIFORNIA (moving to dom. market)—

Pale oils:

100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pourpoint	.18½	.19
10 pourpoint	.18	.18¾
15 pourpoint	.16½	.17
25 pourpoint	.15	.15⅛
200 vis. at 70° F., 3 color:		
Zero pourpoint	.19½	.20
10 pourpoint	.19	.19¼
15 pourpoint	.18½	.19
25 pourpoint	.17	.17⅛

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale		.03
124-126 (a.m.p.) w.c. scale		.03

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0350
125-127 (a.m.p.) wax		.0360
128-130 (a.m.p.) wax		.0375
130-132 (a.m.p.) wax		.0435
133-135 (a.m.p.) wax		.0465
135-137 (a.m.p.) wax		.0490
124-126 (a.m.p.) w.s.	.0290	.03
124-126 (a.m.p.) y.s.	.0295	.03
Petrolatum in barrels, carload lots:		
Dark green	.02	.02⅛
Amber	.02⅜	.02½
Extra amber	.02⅝	.02¾
Lily white	.05½	.05¾
Snow white	.06½	.06¾
Cream	.04¼	.04¼

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04¼	.04⅜
60-62 400	.04½	.04⅝
65 octane	.04⅞	.05
68 octane	.05½	.05¼
70 octane	.05¼	.05½

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.04½	.04⅝
65-69 octane	.04⅝	.05
Above 69 octane	.05	.05½

KEROSENE

GULF COAST—

41-43 prime white		.03½
41-43 water white		.03⅝

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright stocks:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.0375
125-127 a.m.p.		.0387
128-130 a.m.p.		.0412
133-135 a.m.p.		.0437
135-137 a.m.p.		.0455
Crude scale:		
124-126 w.s.	.0290	.03
124-126 y.s.	.0295	.03

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)* $1.10
Van, Tex. (Oct. 11, 1938)* ..... .93
Talco, Tex. (Oct. 11, 1938)* ..... .55
Rodessa, Tex. .....
See North Louisiana gravity schedule
Cass and Panola counties, Texas .....
See gravity schedule
Altus and Tipton† ..... See note below
Cayuga, Tex. (Feb. 15, 1939) $0.68
Clay Creek, Tex. ..... .85

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. East Texas price met by all buyers posting prices. Talco price adopted by Talco Pipe Line on Oct. 11. Cayuga posted by Pan American Pipe Line Co. Clay Creek posted by Sun Oil Co.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† ..... .99
Mirando (Oct. 12, 1938)† ....
Government Wells (Oct. 13, 1938) .....
See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Conroe, Tex. (Oct. 11, 1938)* $1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† ..... See note below
Gibson, La. (Oct. 12, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)‡ .. 1.24
Lafitte, La. (Oct. 12, 1938)† 1.04
Cleveland, Tex. (Oct. 12, 1938)¶ 1.14
Schwab, Polk County (Feb. 20, 1939) 1.00
Hardin, Tex. (Oct. 12, 1938)¶ 1.02
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.03
Abbeville, La. (Jan. 1, 1939)§ .....
See note below
Bosco, La. (Dec. 3, 1938)‖ $0.93
Creole, La. (Oct. 13, 1938)‖ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)‖ .... See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 13, 1938)** .....
Long Lake, Tex. (Oct. 13, 1938)** .. $1.08
Segno and Wing (Oct. 13, 1938)** ...
See note below
Livington (Oct. 11, 1938)† $1.10
Gibson, La. (Oct. 11, 1938)† 1.04

*Humble Oil & Refining Co. †Shell Oil Co., Inc. ‡Texas Co. §Continental Oil Co. ‖Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refinery Co.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 36°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wink take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 18°, 75 cents, 2-cent spread to 20°-20.9° at 82 cents; then a 3-cent spread to 26°-26.9° at $1; then a 2-cent spread to 34° and over at $1.16. Schwab posted by Shell Oil Co., Inc.

North Louisiana and Arkansas

Shreveport, La. (Apr. 18, 1939) $1.05
Smackover, Ark. (Oct. 5, 1938)* ..... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* ..... See note below
Schuler, Jones sand ..... See note below
Tullos and Urania $0.89
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Lisbon, La. (Apr. 29, 1939) .....
See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

Schuler Jones sand schedule starts at below 25°, 66 cents, with 2-cent spread to 40° and over at 98 cents; by Lion Oil Refining Co. on Oct. 5, 1938; Schuler light Morgan sand crude takes North Louisiana gravity scale along with El Dorado and Champagnolle; by Lion Oil Refining Co., Oct. 5; Buckner, Magnolia, and Village schedules posted by Standard Oil Co. of Louisiana and Lion Oil Refining Co. on Oct. 5; quote same prices as for Schuler Jones sand crude. Shreveport by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp. Lisbon: Caddo Crude Oil Purchasing Co., posts below 34°, 73 cents; 34°-34.9°, 75 cents; 35° and above, 77 cents. Effective May 1, 1939, Gulf Refining Co. posted a flat price of 77 cents in Lisbon.

Middle Western States

OHIO OIL CO.
(Effective June 8, 1939)

Illinois old fields $0.95
Illinois basin 1.05
Princeton, Ind. ..... .95
Western Kentucky (June 9, 1939)† .. .90
Birk City, Ky. (June 9, 1939)¶ ..... .90
Corydon, Ky. (June 9, 1939)¶ $0.90
Greendale, Porter, Crystal and Wise, Mich. (Apr. 20, 1938)*† .. .975
Buckeye, Bentley, Edenville, Beaverton, Mich. (Apr. 20, 1939)* ..... .95
Freeman-Redding, Mich. (Apr. 20, 1939)* ..... .89
West Branch and Arenac, Mich. (Apr. 20, 1939)* ..... .74
Allegan-Kent (June 21, 1939)§ .... .88
Bloomingdale (Apr. 10, 1939) ..... .88
Muskegon 1.00
Sherman, Mich. (Apr. 20, 1939)‡ .... .89
Eastern Kentucky:
Big Sandy River (June 9, 1939)† .. 1.02
Kentucky River (June 9, 1939)† .. 1.10

*Simrall Corp. †Ashland Refining Co. ‡Pure Transportation Co. pays above posted prices in Porter, Greendale and Sherman, effective Apr. 20. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp. Kent County by Naph-Sol Refining Co.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939) .....
See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† ..... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)* ... $0.92
Elk Basin, Wyo. (Oct. 11, 1938)*† ... .90
Grass Creek, light, Wyo. (Oct. 11 1938)*† ..... .90
Grass Creek, heavy (Oct. 11, 1938)† . .40
Lance Creek, Wyo. (Oct. 11, 1938)* . .77
Rock Creek, Wyo. (Oct. 11, 1938)* .. 1.00
Iles, light, Colo. (Oct. 11, 1938)† .... .98
Iles, heavy, Colo. (Oct. 11, 1938)† .... .92
Dutton Creek, Wyo. (Oct. 11, 1938)† .....
See note below
Frannie, light, Wyo. (Oct. 11, 1938)† . $0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)† ..... .42
Hamilton dome, Wyo. (Oct. 11, 1938)† ..... .35
Midway, Wyo. (Oct. 11, 1938)† .....
See note below
Salt Creek Tensleep crude, Wyo. (Oct. 11, 1938)† $0.646
Salt Creek (Oct. 11, 1938). See note below
Canon City, Colo. (Oct. 11, 1938)‡ .. $0.90
Florence, Colo. (Oct. 11, 1938)† .... .90
Cat Creek, Mont. (Oct. 11, 1938)‡ 1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡ .... .98
Lance Creek, Wyo. (Oct. 11, 1938)‡. .77
Lea County, New Mexico .....
See West Texas gravity schedule‡
Artesia, Jackson and Maljamar .....
See gravity table‡
Fort Collins and Wellington, Colo. ...
See gravity table‡
Eddy County, New Mexico (Oct. 11, 1938)§ $0.77
*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2 cents spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co. effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico.

Eastern States

SOUTH PENN OIL CO.
(Effective Mar. 6, 1939)

Pennsylvania Grade oil in National Transit lines (Bradford field) $2.00
Pennsylvania Grade oil in Southwest Pennsylvania lines 1.65
Pennsylvania Grade oil in Eureka Pipe Line lines 1.59
Pennsylvania Grade oil in Buckeye Pipe Line lines 1.55
Corning grade oil in Buckeye Pipe Line Co. line (Jan. 24) 1.02

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO
(Effective Mar. 6, 1939)

Bradford, Pa. $2.00
Allengany, N. Y. 2.00

PENNZOIL CO.
(Effective Mar. 6, 1939)

Group A $1.95
Group B 1.94
Group C 1.93
Group D 1.92
Group E 1.90

PURE OIL CO.
(Effective Mar. 6, 1939)

West Virginia $1.50

Canada

ONTARIO
(Oct. 25, 1938, by Imperial Oil, Ltd.)

Petrolia $1.90
Oil Springs 1.97

TURNER VALLEY
(Jan. 5, 1938, by Imperial Oil, Ltd.)

Clear naphtha and discolored naphtha, 65° and higher $2.14
Discolored naphtha and crude oil, 40°-40.9° 1.14
Increasing 2 cents for each degree gravity with top price for 64°-64.9° 1.62
These prices f.o.b. producers' field tankage.

Texas Wildcats

(Continued from Page 99)

Wilbar, Blk. 59, Burleson C.S.L. Drlg. 660 ft.

Parker County

Brown-Gardner Bros. No. 1 Gilbert, T.& P. Sur., Abst. 1958. S.D. 2,200 ft.

Shackelford County

Beams Drlg. Co. No. 1 Jackson, Sec. 85, Blk. 12. T.&P. Sur. S.D.O. 1,215 ft.
Fox & Rudd No. 1 Shotwell, Sec. 59, B.A.L. Sur. Fsg. 1,632 ft.
Hedrick Oil No. 1 Carey, Sec. 51, Blk. 14, T.&P. Sur. U.R. 1,780 ft.
C. R. Schuster No. 1 L. E. DeWitt, Blk. 56, Univ. Lds. R.U.R.

Stephens County

Geo. E. Fagg No. 1 Richardson, Sec. 5, Blk. 31, S.P.R.R. Sur.; 4,000-ft. test. Loc.
Falcon Co. No. 1 B. T. Hopper, Sec. 1142, T.E.&L. Sur. Drlg. 3,800 ft.
Lone Star Gas Co. No. 1 O'Conner. Drlg. 2,200 ft.
A. G. Swanson No. 1 Veale-Frost, Sec. 37, Blk. 8, T.P. Sur. Drlg. 460 ft.
Whittmer O. & G. Co. No. 1 Loving, Sec. 66, B.A.L. Sur.: Ellenberger test to 4,500 ft. Drlg. 2,190 ft.

Taylor County

Tal Vez Oil Co. No. 1 Hugo Calle, Lot 8, Lge. 120, Guadalupe Co. Sch. Ld. Sur. T.D. 2,347 ft.; comp.; 18,490,000 cu. ft. gas.

EAST TEXAS

(Border Counties)

Cass County

Red Iron Drlg. Co. No. 1 N. S. Spearman, Samuel Burnham Sur. Drlg. 2,569 ft.

Harrison County

Ark. La. Gas Co. No. 1-B Abney, J. J. Blair Sur. Tstd. 1,500,000 cu. ft. gas 4,802 ft.; cg. 5,603 ft.

Marion County—Rodessa

Cable Tool Drlg. Co. No. 1 Sol Smith, 345 ft. WL, 450 ft. SL lse., J. Hanks Sur. T. Gloyd 6,075 ft.; 5½-in. csg. 6,085 ft.; T.D. 6,085 ft.; W.O.C.
Magnolia Pet. Co. No. 1 Duncan Est., 216 ft. NL, 1,105 ft. EL lse., T. M. Davis Sur. Cg. 5,886 ft.

Marion County—Other

M. D. Fitzwater No. 1 Mrs. Mary Duncan, Jesse Fitzgerald Sur. R.U. to resume drlg. 105 ft.

Shelby County

Earl McDaniel No. 1 C. W. McDaniel, Wm. Snider Sur. P.B. to perf. 5,100 ft.; gas-dist. zone; S.D. 6,225 ft.
W. H. Neal et al No. 1 A. McDaniel, 150 ft. SL, 200 ft. EL, Wm. Snider Sur. Drlg. 1,457 ft.

Crude Prices by Gravities

	1 Oklahoma	2 Oklahoma and Kansas	3 North and Central Texas	4 Louisiana and Arkansas	5 East Central Texas	6 Gray County, Texas	7 Hutchinson and Carson counties, Texas	8 Raccoon Bend, Sstauma and Tomball, Texas	9 West Texas and Lea County, N. M.	10 Fort Collins and Wellington, Colo.	11 Anahuac and Dickinson, Mirando, Duval, Texas.	12 Refugio, Texas	13 Gulf Coast Texas	14 Cass and Panola counties, Texas	15 Beaumont and West Beaumont, Texas	16 Lockport, Iowa, Cameron Meadows, Louisiana	17 Artesia, Jackson and Maljamar, N. M.	18 Iowa, Louisiana
Below 18	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$.74	....	$.75
18-18.9	....	....	....	....	....	....	....	....	$.53	....	$.74	$.79	$.79	....	....	.76	....	.77
19-19.9	....	....	....	....	....	....	....	....	.53	....	.74	.79	.79	....	$.79	.78	....	.79
20-20.9	$.60	$.70	....	....	....	....	....	....	.55	....	.77	.82	.82	....	.82	.80	....	.81
21-21.9	.63	.72	....	....	....	....	....	....	.57	....	.80	.85	.85	....	.85	.82	....	.83
22-22.9	.66	.74	....	....	....	....	....	$.95	.59	....	.83	.88	.88	....	.88	.85	....	.86
23-23.9	.69	.76	....	....	$.78	....	....	.97	.61	....	.86	.91	.91	....	.91	.88	....	.89
24-24.9	.72	.78	$.71	....	.80	....	....	.99	.63	....	.89	.94	.94	....	.94	.91	....	.92
Below 25	....	....	....	$.73	....	....	....	....	....	....	....	....	....	$.73	....	....	....	....
25-25.9	.75	.80	.73	.75	.82	....	....	1.01	.65	....	.92	.97	.97	.75	.97	.94	....	.95
26-26.9	.78	.82	.75	.77	.84	....	....	1.03	.67	....	.95	1.00	1.00	.77	1.00	.97	....	.98
27-27.9	.81	.84	.77	.79	.86	....	....	1.05	.69	....	.97	1.02	1.02	.79	1.02	.99	....	1.00
28-28.9	.84	.86	.79	.81	.88	$.72	$.67	1.07	.71	$.81	.99	1.04	1.04	.81	1.04	1.01	$.61	1.02
29-29.9	.87	.88	.81	.83	.90	.74	.69	1.09	.73	.83	1.01	1.06	1.06	.83	1.06	1.03	.63	1.04
Below 30	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30-30.9	.90	.90	.83	.85	.92	.76	.71	1.11	.75	.85	1.03	1.08	1.08	.85	1.08	1.05	.65	1.06
31-31.9	.92	.92	.85	.87	.94	.78	.73	1.13	.77	.87	1.05	1.10	1.10	.87	1.10	1.07	.67	1.08
32-32.9	.94	.94	.87	.89	.96	.80	.75	1.15	.79	.89	1.07	1.12	1.12	.89	1.12	1.09	.69	1.10
33-33.9	.96	.96	.89	.91	.98	.82	.77	1.17	.81	.91	1.09	1.14	1.14	.91	1.14	1.11	.71	1.12
34-34.9	.98	.98	.91	.93	1.00	.84	.79	1.19	.83	.93	1.11	1.16	1.16	.93	1.16	1.13	.73	1.14
Below 35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.00	1.00	.93	.95	1.02	.86	.81	1.21	.85	.95	1.13	1.18	1.18	.95	1.18	....	.75	....
36-36.9	1.02	1.02	.95	.97	1.04	.88	.83	1.23	.87	.97	1.15	1.20	1.20	.97	1.20	....	.77	....
37-37.9	1.04	1.04	.97	.99	1.06	.90	.85	1.25	.89	.99	1.17	1.22	1.22	.99	1.22	....	.79	....
38-38.9	1.06	1.06	.99	1.01	1.08	.92	.87	1.27	.91	1.01	1.19	1.24	1.24	1.01	1.24	....	.81	....
39-39.9	1.08	1.08	1.01	1.03	1.10	.94	.89	1.29	.93	1.03	1.21	1.26	1.26	1.03	1.26	....	.83	....
40 and over	1.10	1.10	1.03	1.05	1.12	.96	.91	1.31	.95	1.05	1.23	1.28	1.28	1.05	1.28	....	.85	....

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1939 High	1939 Low	Week ending July 1 High	Week ending July 1 Low	Week ending July 1 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
70	50	66⅛	61½	62½	Amerada Corp.	788,675	N.P.	50cQ	7-1-39	$2.00	$2.07	$3.04	78	55	111⅞	51½
23½	18⅛	20⅝	19⅝	20	Atlantic Refining	2,663,999	$25	25cQ	6-15-39	1.00	1.40	3.51	27⅝	17⅜	37	18
21½	10⅞	12⅜	11	11½	Barber Asphalt Co.	390,223	$10	75c	12-16-37	....	—.85	1.91	23⅜	12⅛	43⅜	10⅛
19½	12⅜	13⅜	12⅜	12⅜	Barnsdall Oil Co.	2,250,344	$5	25cQ	2-1-39	1.00	1.26	.85	21⅜	10⅛	35¼	10
9¼	7	7⅜	7½	7⅝	Consolidated Oil Corp.	13,751,846	N.P.	20cQ	8-15-39	.80	.55	1.48	10⅜	7	17⅞	7
31½	20½	22½	20½	20⅝	Continental Oil of Delaware	4,682,581	$5	25cQ	6-27-39	‖1.00	1.10	2.98	35⅜	21¼	49	24
8⅜	4⅜	5⅝	4⅜	5	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	.83	.94	9⅜	5	17⅝	4⅜
20¼	12⅜	13½	13½	13½	Lion Oil Refining	435,815	N.P.	25cQ	4-20-39	1.00	2.09	2.17	25⅛	15⅝	34	12½
16½	11⅛	13	12½	12⅜	Mid-Continent Petroleum	1,857,912	$10	25c	6-1-39	.60	.56	2.86	22⅝	12¼	35⅝	14
14⅞	10⅜	11	10¾	10¾	Mission Corporation	1,379,245	$10	25c	6-29-39	1.00	1.04	1.31	17⅜	10⅝	34	15
15½	6½	7⅜	6⅜	7	National Supply	1,155,517	$10	$2 pf.‡	12-22-37	....	—.79	4.90	28	12½	41⅜	17⅝
10¼	6⅝	7	6⅝	6⅞	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	.20	.25	1.30	14⅞	8⅜	22⅞	8
11⅞	9	9	9	9	Pacific Western Oil	1,000,000	N.P.	50c	12-20-38	.50	1.22	1.39	15⅞	10¼	29⅜	11⅜
6⅜	5	5⅛	5	5	Pan American Pet. & Trans.	4,702,945	$5	$1*	12-21-37	....	.08	1.18	9¼	6¼	17⅛	7
43¾	31¼	35	32	32¾	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-39	‖2.00	2.03	5.42	44⅜	27¼	64	30½
22½	17¼	19¾	19¼	19¾	Plymouth Oil Co.	1,006,200	$5	35cQ**	6-30-39	1.40	2.59	2.85	25⅜	15	29⅞	13
11¼	6⅜	7¼	6⅝	6⅜	Pure Oil Co.	3,982,031	N.P.	25c	12-1-37	....	.38	2.15	13½	8¼	24⅜	8⅜
10¼	6⅝	7⅜	7	7⅛	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-38	.50	.51	.35	9⅞	5	6½	4⅛
22⅜	16⅛	18½	17⅛	17¾	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-39	1.00	1.52	1.97	27½	15½	54⅛	16
15⅛	10⅝	11⅜	10⅛	10⅝	Shell Union Oil	13,070,625	N.P.	25c	7-20-39	.70	.72	1.44	18⅜	10	34⅜	14⅞
29½	18½	19½	18¾	18¾	Skelly Oil	995,349	$15	50c	12-15-38	1.00	2.27	6.07	34¾	18½	60⅝	26½
13¾	10½	11⅞	11	11⅛	Socony-Vacuum	31,206,071	$15	25cSA	3-15-39	.50	1.29	1.82	16⅜	10⅜	23¼	13
30⅛	25⅛	26⅜	25⅛	26¼	Standard Oil of California	13,004,153	N.P.	30cQ†	3-15-39	1.40	2.22	3.17	34⅞	25⅛	50	27⅛
29⅛	23¼	25⅛	24⅜	24½	Standard Oil (Indiana)	15,272,020	$25	25cQ	6-15-39	1.00	1.82	3.66	35½	24⅜	50	26½
50⅝	46	..	..	..	Standard Oil of Kansas	106,190	$10	$2	12-8-38	2.00	5.25	6.93	50⅛	32½	43	30⅝
53¼	40⅛	42½	40⅛	41½	Standard Oil of New Jersey	26,618,065	$25	50c§	12-15-38	§1.50	2.86	5.64	58⅜	39¾	76	42
66	46	52	51	52	Sun Oil	2,316,484	N.P.	25cQ	6-15-39	1.00	1.07	3.86	65½	45	77½	44½
3¼	2	2⅛	2	2	Superior Oil Corp.	1,388,979	$1	10c	12-28-38	.10	.24	.32	4¼	1⅜	7⅝	1½
48¼	34⅞	38¼	34⅞	36¼	Texas Corp.	10,876,882	$25	50cQ	7-1-39	2.00	2.13	5.02	49⅝	32⅝	65½	34⅜
5⅜	3½	4	3⅝	3¾	Texas Gulf Producing Co.	888,142	N.P.	10c	6-15-39	.15	.86	.08	5⅞	2⅝	9⅝	2
10⅛	7½	7⅞	7¾	7¾	Texas Pacific Coal & Oil	888,236	$10	10c	6-1-39	.40	1.16	1.11	12½	7	16⅝	5⅝
14¼	11¼	12¼	11¾	11¾	Tide Water Associated	6,375,253	$10	25c	6-1-39	1.00	1.28	2.08	15⅜	10⅛	21⅝	13⅛
19¾	16⅛	16½	16⅛	16⅛	Union Oil of California	4,666,270	$25	25c	8-10-39	1.20	1.47	2.58	22½	17⅛	28¼	17½
23⅝	20⅛	22¾	21	21	Union Tank Car Co.	1,177,381	N.P.	30cQ	3-1-39	1.30	1.16	1.70	23½	20	31½	22
3⅜	2½	2⅝	2½	2½	Wilcox Oil & Gas	487,568	$5	....	5-10-28	....	.52	.24	3½	1⅝	6¼	1⅜

*Payable in 3½ per cent notes. †Includes extras. ‡One-tenth share $2 preferred stock. §Also 1½ per cent stock dividend. ‖Also right to subscribe to bonds. ¶Also 1 per cent in stock. **Also 2 per cent in stock. —Deficit.

New York Curb Exchange

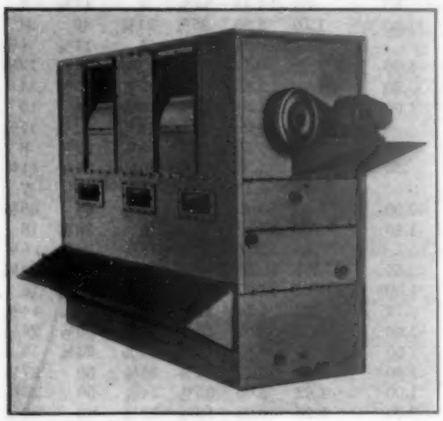
1939 High	1939 Low	Week ending July 1 High	Week ending July 1 Low	Week ending July 1 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
9	5½	6¾	6	6¼	American Republics Corp.	1,308,049	$10	10c	7-11-38	$0.10	—$0.22	$0.27	11¾	5	10	6⅝
7¼	3½	4⅛	4	4	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	10¼	4⅞	21⅝	7
34⅝	27¼	32	31	31	Buckeye Pipe Line Co.	200,000	$50	50c	3-15-39	2.00	2.36	4.02	39	22½	51½	36
130	110	113	111	111	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-26-39	6.50	5.32	6.73	128	97	112	95½
9¼	5⅝	6⅛	5½	5½	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	11	5⅛	5⅝	1½
1¼	½	1⅝	1¼	1¼	Cosden Petroleum	462,551	$1	....	.....	....	....	.19	2⅝	⅞	5½	1½
23¾	16¾	19½	16¾	17⅛	Creole Petroleum	6,975,383	$5	50cSA†	6-15-39	1.00	1.64	1.61	27½	17½	38¾	20¼
7⅛	4⅛	4½	4⅛	4⅛	Darby Petroleum	351,390	$5	25cSA	1-15-39	.50	....	1.36	10¼	5½	18⅝	6½
2⅝	1⅝	2¼	2	2	Derby Oil & Refining	263,162	N.P.		.....	....	—.91	1.34	3½	1½	8⅜	2¼
20	15⅛	..	..	..	Eureka Pipe Line	50,000	$50	50c	8-1-39	3.00	—.37	—.12	31	16	47½	24½
40	29¼	33	31¾	31¾	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-39	1.00	1.43	3.51	46⅞	33	63½	33
69⅜	53	62	57¼	57¼	Humble Oil & Refining	8,987,840	N.P.	37½c	7-2-39	3.00	3.98	5.22	72⅝	56	87	54⅞
17	14⅛	14⅝	14⅛	14¼	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	6-1-39	1.25	.96	.98	19½	14⅛	24¼	14½
7	5⅝	..	..	..	Indiana Pipe Line	300,000	$10	30c	5-15-39	.50	.47	1.03	9⅜	6	15	5⅝
27½	20½	21¾	20½	20½	International Petroleum	14,324,088	N.P.	1.00†‡	6-1-39	2.50	1.98	....	31¼	21	39½	23½
3½	2¼	2½	2¼	2¼	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	.10	.14	.17	5	2⅛	8¾	2⅝
9½	7⅛	9	8¾	8⅞	Lone Star Gas	5,553,747	N.P.	20c	4-20-39	.60	.88	1.14	10⅝	6⅝	14¼	5¼
7¾	4⅞	5½	5	5	Louisiana Land & Exp.	2,977,449	N.P.	10cQ	3-15-39	.45	.45	.58	9⅜	6½	15¼	6⅝
17	15	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-39	1.00	2.28	3.26	24	16	33½	17
8¾	7	7⅝	7	7	Midwest Oil Co.	998,474	$10	50c	12-15-38	1.00	.93	1.14	9¾	6⅝	14⅝	6¼
5½	4⅞	5⅛	5	5	Mountain Producers	1,593,584	$10	30cSA	6-15-39	.60	.62	.76	5⅝	4½	7⅞	4⅛
13¼	11¼	11½	11¼	11½	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-39	1.00	.84	.96	14⅝	11½	19½	12
8½	7¼	8	8	8	National Transit	509,000	$12.50	35c	6-15-39	.75	.88	1.19	9¼	6½	12½	7¼
1¾	1½	1½	1½	1½	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	2⅝	1½	5	1⅛
4⅞	4	4¼	4¼	4¼	New York Transit	100,000	$5	15c	4-15-39	.25	.16	.49	4½	3½	5⅝	3⅞
6	4½	..	..	..	Northern Pipe Line	120,000	$10	15c	6-1-39	.35	.24	.78	6	4	12⅜	5⅜
7⅝	4¼	5⅞	4⅞	4⅞	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7¾	3½	9⅝	2⅝
2¾	1¼	1⅝	1⅝	1⅝	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.17	—.17	4½	1⅝	12¾	2
3	2	2⅛	2	2	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	4	2⅛	6½	2¼
4	3½	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-1-39	.30	—.27	.85	5⅜	3¼	7¼	3⅞
34⅞	27¾	30	29	29	South Penn Oil	1,000,000	$25	37½cQ	3-31-39	1.75	1.44	4.64	39	28¾	56	35
19¾	17	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50cQ	7-1-39	2.00	—.41	.95	22¼	16½	42	20
18¾	17¼	18⅛	17¾	18	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-39	1.25	1.45	1.60	18¾	15	21¼	17¾
11	6	11	9¾	10	Standard Oil of Nebraska	161,403	$25	25c	3-29-37	....	—.69	—.58	8⅝	5½	13¾	8
21¼	17	21	20½	20½	Standard Oil of Ohio	753,740	$25	25c	3-15-39	1.00	1.81	3.67	22¾	16¼	45	16
2⅝	1⅞	2	1⅞	2	Sunray Oil	2,007,076	$1	5c	4-27-39	.05	.23	.42	3¼	2	4⅞	2
4	2⅝	3	3	3	Texon Oil & Land	936,024	$2	10c	6-30-39	.60	.56	.51	5¼	3½	7⅝	2
5½	2½	3⅝	3½	3⅝	Transwestern Oil Co.	750,000	$10	....	.....	....	—.12	.48	7⅝	4¼	13⅞	4⅝
3⅜	1⅝	2	1¾	1¾	United Gas Corp.	7,818,959	$1	....	.....	....	—.51	25	5¼	2⅝	13⅞	3

†Includes extras. ‡Payable in Canadian funds. §Of which $1 was in preferred stock. —Deficit.

New or Improved Equipment

Evaporative Cooler is Adapted for Warm and Dry Regions

The Young evaporative cooler, announced by Young Radiator Co., Racine, Wis., supplements the company's



line of full-flow engine jacket-water coolers, especially in very warm, dry localities where the latter type would work under the handicap of a high air temperature. The evaporative cooler takes advantage of the dry atmosphere and performs its cooling task easily by the evaporation of water into the air. Its consumption of water is small and not at all on the same basis as the consumption of atmospheric cooling-towers where in addition to the useful evaporation, a loss due to "drift" is inherent. In the evaporative cooler only useful evaporation takes place, and the consumption is governed by the load on the cooler and the wet bulb depression in the atmosphere.

Wilson Heads Fort Worth Office

John H. Wilson, vice president of Independent Exploration Co., is in charge of the new branch office at 2015 Fort Worth National Bank Building in Fort Worth, Tex. Mr. Wilson is acting as district representative and staff geologist operating in North and West Texas, Rocky Mountain region and Pacific states. His experience includes all types of geological and geophysical methods. His specialty is the correlation of geophysical results with available geological data, especially in areas of complicated geologic section. Associated with Mr. Wilson is R. A. LeMay, who will continue to manage the company's Tulsa office.

Here and There With Men Who Manufacture Equipment

Arch Campbell, Mid-Continent representative of Waukesha Motor Co., has returned to his headquarters in Tulsa from a trip through Wyoming, Montana, and Alberta, Canada.

Economy Electric Lantern Co., Inc., on July 1 consolidated its general office, formerly in Chicago, with its manufacturing plant at 31 West Cherry Street, Milwaukee, Wis.

R. L. Marston has resigned as regional manager for Sperry-Sun Well Surveying Co. in the Gulf Coast territory to resume active work in oil production. Dwight C. Roberts, regional manager on the Pacific Coast, will be transferred from Long Beach, to Houston, from where he will direct activities of both the Gulf Coast and the Pacific Coast.

H. M. Haseltine, assistant to the president of Guiberson Corp., has returned to his office in Dallas, Tex., following an eastern trip during which he made a survey of general conditions and sales prospects in the Illinois, Michigan and Pennsylvania oil fields.

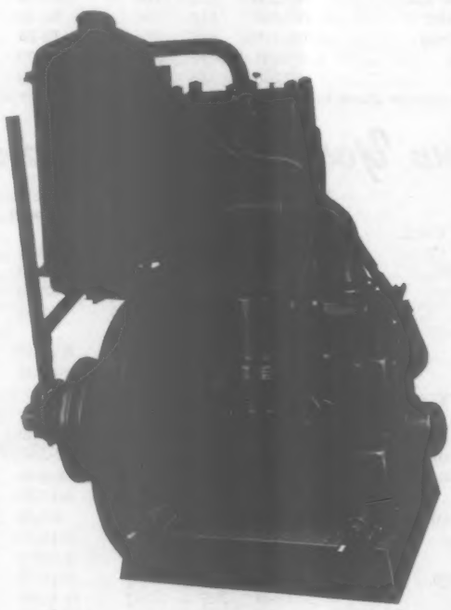
John Zink Burner Co., manufacturer of refinery and oil-country burners, has established a Chicago office at 7309 East End Avenue, and appointed A. J. Foley, recent sales manager for Hanlon-Waters, to represent it in the Chicago area.

W. H. (Henry) Eason, Mid-Continent representative of W-K-M Co., Inc., of Houston, Tex., has been transferred from Great Bend, Kans., to Tulsa, where he has offices in the Thompson Building.

John H. Baird, of New York, export representative for several manufacturers of oil-field equipment, sailed June 28 for a business trip to London, Paris, and The Hague.

National Superior Gas Engine Built for Oil-Country Service

The National Supply Co. has introduced a new vertical two-cycle, two-cylinder gas engine for light and medium pumping service. It is the Superior Type E,



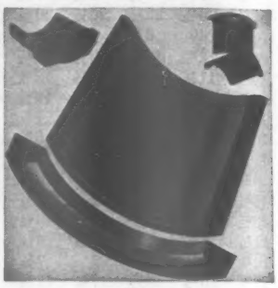
with a rating of 20 hp. at 700 r.p.m. and a 5-in. bore by 6-in. stroke. The engine is identical in general design with the larger types of Superior vertical two-cylinder gas engines, in use for several years in heavier oil-field pumping.

This type of engine has a number of advantages for oil-country pumping service. It operates at a slower speed, which makes it possible to adapt it to both single- and double-reduction gears as well as small geared powers. In addition, it has the same general design characteristics of the slower-speed horizontal-type oil-country gas engine without its bulk and weight. In fact, the Type E Superior vertical engine may be mounted with practically the same installation costs and space requirements as a high-speed engine of equal power.

The crosshead type construction makes possible unusual economy in the use of lubricating oil. The crankcase oil does not contact the hot piston and cannot be contaminated by carbon from the piston and the rings.

Gatke Tuftex Molded Bearings Stand Pressure and Shock

Improved nonmetallic bearings containing a patented material, Gatke Tuftex, are announced by Gatke Corp., Chicago. The manufacturer states that Gatke Tuftex affords a distinct advance in long-wearing qualities and much lower friction.



Gatke Tuftex bearings are molded under high pressures by exclusive processes, producing a molded bearing surface that approaches the hardness of steel, yet cannot score journals. The dense but resilient structure withstands pressures and shocks that reduce the life of metallic bearings.

It is said these improved nonmetallic bearings meet situations where operating conditions cause rapid wear, high maintenance, and production delays. Designed for the application in water-lubricated, oil- or grease-lubricated, and self-lubricated types.

French Named Purchasing Agent

M. H. French, who has been on the field sales staff of the Guiberson Corp. for the past 5 years, covering districts in Texas and Oklahoma, has been appointed purchasing agent of the company, and will be stationed at the company's headquarters offices in Dallas, Tex. Mr. French attended the University of Kansas, and was with the Reserve Oil Co. before becoming connected with the Guiberson Corp.

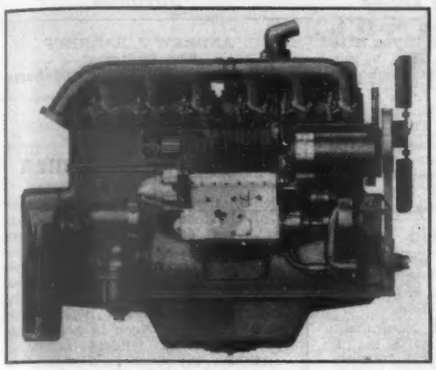
Security Opens Houston Office

The new division office, warehouse, and manufacturing plant of Security Engineering Co., Inc., at 5525 Clinton Drive, Houston, Tex., includes many modern features. Offices are finished in glass bricks, tile, and stucco, and are air-conditioned. Special attention was given to providing maximum ventilation and light, The building, of steel throughout, occupies a space 160 by 250 ft.

Securaloy pipe and accessories and other Security products will be stocked and serviced to meet the needs of Oklahoma, Louisiana, and Gulf Coast oil operators.

Any of Five Fuels Will Operate New Type Waukesha Engines

Waukesha Motor Co., Waukesha, Wis., is introducing a new line of engines for truck and bus service. These new engines are of the multifuel, polycycle type. Intended for use with oil, gasoline, butane, or producer or natural gas, every engine in this series is convertible by simply changing the fuel-burning accessories.



While conversions of industrial engines from Diesel oil to natural gas have been common practice in the oil fields, the plan to combine the manufacturing economies of quantity production on gasoline engines with the oil-engine production was decided upon only after a survey showed that many truck and bus operators were unable to adopt the Diesel engine because of its size and weight or for other reasons.

Since none of the internal mechanism is changed and the engine is basically the same except for fuel accessories, its weight as an oil engine is only a few pounds greater than its weight as a gasoline engine.

Among other advantages claimed are reduced maintenance and service costs because of the interchangibility of service parts between gasoline and oil engines and the large quantity production. Illustrated is the first of a series of 6-cylinder truck engines of 525 cu. in. displacement.

Vacuum-Tight Units Fabricated Free From Customary Joints

An engineering advancement made by Chicago Metal Hose Corp. features the attachment of metal and fittings and end seals to metallic tubing by means of electric resistance welding. This development, designed principally for use with stainless-steel tubing and stainless-steel bellows, permits the fabrication of completely sealed vacuum-tight units free from soldered, brazed, or torch-welded joints of any kind.

End fittings made from stainless steel usually have been silver-soldered to stainless bellows and tubing where corrosive media or high temperatures were to be encountered. However, to meet conditions where exceptionally high temperatures and actively corrosive elements preclude even the use of silver solder, electric resistance welding has unique application.

Circumference seam welding, made possible through the development of specialized equipment, operates automatically to eliminate the human element. Extremely thin gages of metal can be handled, and metals of unlike thickness or unlike analyses can be joined.

Fine-Grained Powder Creates Abrasion-Resistant Surface

"Surfaceweld A," announced by Lincoln Electric Co., Cleveland, Ohio, is a fine-grained alloyed powder to be applied with the carbon arc and giving a smooth, dense, hard (abrasion-resistant) surface. It can be applied in a thin layer if desired.

This material gives a coating with a hardness of approximately Rockwell 54C. This hardness will vary somewhat depending upon the amount of admixture with the base metal to which it is applied. Hardness has little relation to abrasion-resistance.

This alloy develops its full hardness in the as deposited condition, maintains its hardness at high temperatures and resists scaling at high temperatures. The deposit cannot be softened by annealing. Under many conditions it is said to be corrosion-resistant.

Trade Literature

CLIMAX MOLYBDENUM CO., 500 Fifth Avenue, New York.—Current issue of Moly Matrix.

B. F. GOODRICH CO., Akron, Ohio.—Operators' Handbook for users of Goodrich tires, 100 pages.

NEW JERSEY ZINC CO., 160 Front Street, New York.—36-page booklet on improved maintenance of metal surfaces with zince dust paints.

MERCO NORDSTROM VALVE CO., 400 North Lexington Avenue, Pittsburgh, Pa.—Catalog of new Nordstrom flexible coupling valves.

JOHNSON BRONZE CO., 310 South Mill Street, New Castle, Pa.—Catalog L-1, Johnson Ledaloyl bearing bronze.

VAGABOND COACH MANUFACTURING CO., New Hudson, Mich.—Bulletin on new Model 20 double-floor trailer.

DIAMOND CHAIN & MANUFACTURING CO., Indianapolis, Ind.—Pamphlet, "The Progress of Roller Chain Drives."

FOSTER WHEELER CORP., 165 Broadway, New York.—Current issue of Heat Engineering.

UNITED STATES RUBBER CO., all branches.—A 36-page booklet, "Belting Biographies."

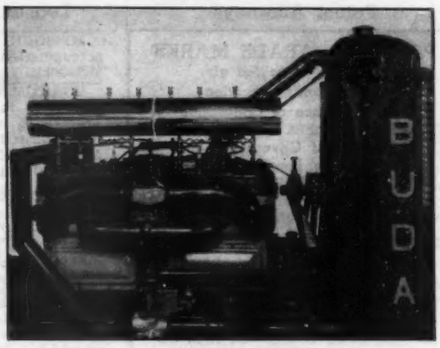
WESTINGHOUSE ELECTRIC & MANUFACTURING CO., East Pittsburgh, Pa.—16-page booklet on characteristics and advantages of heat-treated gears.

AMERICAN MANGANESE STEEL DIVISION of American Brake Shoe & Foundry Co., Chicago Heights, Ill.—64-page booklet, "Amsco Manganese Steel, the Toughest Steel Known."

CLARK BROS. CO., Olean, N. Y.—Booklet telling story of gas recycling and repressuring and distillate recovery.

Starting of Engine Is Easier Job With Flournoy Easy Crank

The Flournoy Easy Crank, announced by Buda Engine & Equipment Co., 15 Kendall Street, Houston, Tex., is a new device, invented by A. R. Flournoy, president of Buda, designed to reduce the power required to crank an engine in starting it. By the mere opening of valves the compression pressure in all cylinders is diminished to an extent which lightens the load to about one-third that required with most normal compression ratios, and still permits quick starting.



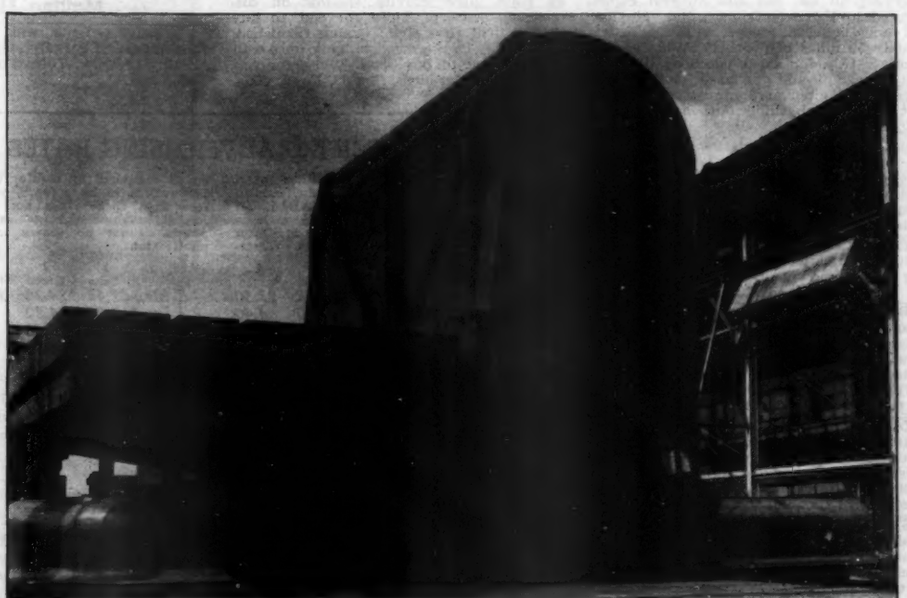
In addition to the advantages immediately apparent through lightening the load for the person who does the hand cranking, the hazard of "kicking" is said to be virtually eliminated, a feature which appeals to the safety division.

Although the Flournoy Easy Crank makes it possible to hand-crank engines up to 150 hp., or even larger, yet, even though starting equipment is used in conjunction with this device, these larger engines can be started readily with 6-volt starting, rather than 12-volt, thus reducing initial total investment in starting equipment and battery upkeep costs, etc.

LUFKIN INSTALLS WORLD'S LARGEST MOLDING MACHINE

Lufkin Foundry & Machine Co., Lufkin, Tex., manufacturer of reduction gears for oil-well pumping, recently installed what is said to be the largest molding machine of its type ever built, and the first having all working parts completely enclosed in grease-packed housings. All guide-pins are hardened and ground and they operate in hardened and ground bushing with provision for forced lubrication.

This machine, known as the No. 66A Davenport Jolt Rollover Draw machine, is equipped with uniform-tension cast-iron rings. The rollover mechanism operates on roller and ball bearings throughout. The machine is completely air-operated and has a lifting capacity of 12,000 lb. The total weight is approximately 40 tons. This machine will be used in the manufacture of Lufkin pumping equipment.



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PATENT LAWYER
Patents obtained — infringement practice in all Courts—oil field experience, 1807-11 Tower Petroleum Bldg., Dallas, 2014 Second Nat'l. Bank Bldg., Houston, 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

Leases and Drilling Blocks

LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

ILLINOIS 60,000 acres in and near production. Illinois Minerals Company, Cairo, Illinois.

FOR SALE Oil and gas leases, drilling propositions and small production. All in shallow territory. Will make price on 500 or more acres, drill and case one or more wells. W. P. HARLEY, Bowling Green, Kentucky.

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only
A complete SERVICE EXPERTS in every department of the Oil Business at your SERVICE a REAL SET-UP. The best opportunity ever offered you. Leases in large or small lots at
WHOLESALE PRICES
Write today and get started right.
OIL BROKERS EXCHANGE
200 Don Juan Bldg., Santa Fe, N. M.

FOR SALE — 11,400 acres deeded land carrying all oil, gas and mineral rights located in Valencia County, New Mexico. Oil now being produced within approximately 50 miles of property. Will furnish spotless title for $3.00 per acre OR will sell 10-year oil and gas lease for $1.50 per acre with 15c per acre annual rental. Will not consider anything but cash deal. If interested write:
Owner, c/o J. W. B.,
Box 915,
Roswell, New Mexico.

SACRIFICE 40-acre Oil Lease, Chaves County, for only $10.00, full price. Guarantee title P. O. Box 191, Clovis, N. Mex.

EAST TEXAS Woodbine—Trinity sand wildcats starting shortly offer best chances big quick money, Leases—Royalties.
E. CROFT, PROCTOR, TEXAS.

BROKERS—Quick profits for you and a speculative fortune for your clients in leases near our 6,500-foot test Grady County, Okla. Hot Spot for next big oil field. Special deal for brokers.
STAUFFER PETROLEUM COMPANY
P. O. Box 774 Oklahoma City, Okla.

OIL DEVELOPING, high gravity less than 1000 ft. also deeper strata productive. More development wanted. Good leases available. Advise your interest. We will connect you with reliable parties. Chamber of Commerce, Le Veta, Colorado.

STARTING well on offset acreage to shale gas. Well has paid $8,000.00 last two years, market 10c M. Wells near producing oil above gas. One half well and forty lease $1,750 if sold within ten days. Fee owner, L. PRICE, Coweta, Oklahoma.

WANT A 100 TO ONE?
Oil will be found in next 90 days in Forest City Basin. Get particulars. Geologist, Box 152, Milan, Missouri.

FOREST City Basin—Atchison Co., Kans. Oil leases near drilling well. Margaret Haynes, R. #3, N. Topeka, Kansas.

Leases and Drilling Blocks

MISSOURI leases in blocks and scattered acreage. HARRAH & FRITH, Chillicothe, Missouri.

YOAKUM CO., Tex., 10 yr. oil lease on 980 acres in Sec. 596 and 597 for sale. Tract is ¾ x 2 miles and traverses high trend near Roberts pool. Owner, DR. J. A. ROBINSON, 233 21st Place, Santa Monica, California.

NEW MEXICO WEEKLY OIL SCOUT REPORT. — Send for sample copy. Roy G. Barton, Box 968, Hobbs, N. M.

WANTED proven or semi-proven acreage for immediate drilling. J. Bell, 4812 Pine Tree Dr., Miami Beach, Florida.

INVESTORS, brokers, salesmen, a new deal in shallow production, best ever offered. You receive an interest in 40 acres on which I drill a well. In addition you receive a lease on 50 acres abutting the 40 I drill. All in proven area. Your total investment only $150.00. Buddenborg, Osawatomie, Kans.

NEW MEXICO
State Oil and Gas Leases
Forty acres and multiples thereof at $6.00 to $60.00 per forty in the Hot Spots. No junk! Buy where the major companies own leases. Write for lists. Twenty years in the business and not a complaint.
HARRY S. WRIGHT, STATE LESSEE
Registered Dealer—State of Iowa
Box 166, Council Bluffs, Iowa
Box 347, Santa Fe, New Mexico

320 ACRES, Crane Co., Tex., Magnolia lease, cheap in fee. Address 415 Littlefield Building, Austin, Texas.

GAS PAYS LIKE OIL
1/8th spread in 5 leases offsetting production $500. 1/8th interest individual lease $125. Upon sale 7 spread interests 5 wells drilled. Pipelines in production returns 20%. Money escrowed. Maps, information.
BOX 382,
Osawatomie, Kans.

ALBERTA — CANADA
Leases and Drilling Blocks
Tell us your requirements and receive promptly full and accurate information.
OILFIELDS INFORMATION AGENCY
C. T. Fillan
810 Lancaster Bldg., Calgary, Alberta.

RELIABLE drilling contractor with good rig will sell 1/8 interest in 200-acre oil lease, high gravity shallow oil district northeast of Tulsa for $50, to buy fuel to drill first well. Casing furnished. Money may be escrowed in bank until well is completed to pay sand. Write for full details and references. Box 83, Foyil, Okla.

Leasing and Drilling Blocks

HAVE spreads and drilling blocks in Misscuri for sale or trade, or if you have equipment capable of 2,000 feet, a mutually profitable arrangement might be made.
Address Box J-152,
The Oil and Gas Journal, Tulsa, Okla.

I HAVE some leases and royalties for sale close to drilling operations in Hamilton County, Illinois. If interested write
GEORGE W. HOGAN, JR.
McLeansboro, Illinois.

Situations Wanted

EXPERIENCED stillman, 10 yrs. one company, now available. Sober, industrious, capable. Address Box K-143, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED Oil Field Equipment salesman wants to associate with manufacturer who desires to sell products thru supply stores on a commission basis. Address Box K-154, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED refinery technician will operate your old plant or build and operate new plant more efficiently and at a greater profit. Graduate M.I.T. Chemical Engineer with 13 years' industrial experience including positions as Process Supervisor and Chief Chemist. Experienced in development and manufacture of lube oils, greases, wax, asphalt, specialties, and light oils. References. Address Box K-162, The Oil and Gas Journal, Tulsa, Okla.

OIL SPECIALIST tax consultant. Age 37, C.P.A. 14 yrs. experience, which includes systematizing, financial reports, and diversified public accounting. Highest credentials as to integrity and creative ability. Address Box K-130, The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

IF YOU know drilling or production servicing, we will be glad to assist you in purchasing our servicing or cleanout equipment, and recommend a location where plenty of work is available from major oil companies. Cardwell Mfg. Co., Inc., P. O. Drawer 2001, Wichita, Kans.

For Sale—Maps

TEXAS and NEW MEXICO
UP-TO-DATE OIL DEVELOPMENT MAPS
Zingery Oil Map Co., Fort Worth, Tex.

Mailing Lists

ROYALTY Lists. Oil Investor Lists. Stockholders Lists. By states. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Oklahoma.

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ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
703 Kennedy Bldg., Tulsa, Okla.

WILL BUY non-producing landowners royalty—under drilling wells only. P. H. HAWLEY, 727 W. 7th St., Los Angeles, Calif.

WANTED producing oil royalties and oil payments in North and West Texas and New Mexico. P. O. Box 1535, Fort Worth, Texas.

OWNERS of fractional landowners royalty interests still paying send full details to City Investing Co., 434 Roosevelt Bldg., Los Angeles, Calif.

WILL buy producing royalties and mineral rights in Arkansas. P. O. Box 807, El Dorado, Ark.

ROYALTIES PURCHASING TRUST, LTD., Moorgate Hall, Moorgate London E. C. 2, England, are buyers of producing oil royalties.

PRODUCING AND NON-PRODUCING ROYALTIES
Either to buy or to sell properties of merit, communicate with
WALTER T. SCOTT
Tulsa Loan Building, TULSA.

SACRIFICE all or any part perpetual, fully participating royalty under 80 acre tract close shallow producers for $25.00 per acre. Address Box K-172, The Oil and Gas Journal, Tulsa, Oklahoma.

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SINCE 1908 Burkhart's legal forms—servicing Mid-Cont. oil fields, including Ill., La., Mo., Ind. & Ky. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Money Raising

WANT CAPITAL to invest in perpetual mineral rights in North Permian Basin in Texas and New Mexico in major company blocks on geophysical highs. Rapid developement under way now. Will take interest after all monies have been repaid. Address, Box J-990, The Oil and Gas Journal, Tulsa, Okla.

CAPITAL WANTED—To buy producing properties in Texas. Experienced, legitimate. No mail promotion. References exchanged. Address Box K-171, The Oil and Gas Journal, Tulsa, Oklahoma.

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

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6 Lines	2.10	3.60	5.10	6.60	10 Lines	3.50	6.00	8.50	11.00

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We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

COMPLETE KELLOGG CRACKING UNIT

3000 bbl. cap. Kellogg Cracking Unit—Two Furnaces—Pacific Centrifugal Charging Pumps all Complete.

Will sell "as is and where is" or take turnkey job for dismantling and reerection.

Send us your inquiries.

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SONKEN-GALAMBA SUPPLY COMPANY

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WANTED
GAS PROPOSITION

I am reclaiming complete gas property, many miles of pipe from 2" to 12", gas engine driven compressors, orifice and domestic meters, regulators, etc.

Would be interested in attractive propositions in which this material could be used in supplying either domestic or industrial load.

Address with full details.
Box K-164,
The Oil and Gas Journal,
Tulsa, Okla.

WANTED—Partner to take half working interest 78-acre lease Kentucky shallow field. Will sell half, including first well to top sand, for $1,500.00. Three offsets. No proration. References. Address Box K-151, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—Established oil well servicing business in Illinois Basin. Equipment consists of sixteen well servicing units of standard make mounted on good trucks. Principal work is for major companies. Owners are disposing of this highly profitable business only because of other substantial interests. For further details write Box K-170, The Oil and Gas Journal, Tulsa, Oklahoma.

Addresses Wanted

$15.00 REWARD will be paid for information as to present whereabouts of J. E. (Jim) Waldron, Frank G. Pierce, W. A. Forbes, J. O. Britton.

ORVILLE ROBERTS
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MOST BEAUTIFUL MOUNTAIN

Site near town in Boulder County, Colorado, on main highway to Estes Park. Mile of Trout stream. Much valuable timber, particularly red spruce. Minerals. Large mine close by. Over 500 acres, suitable for platting cabin sites, resort or Dude Ranch. If you have a hanker for such a deal, of most attractive and great possibilities not far distant, then buy it. No trades. Address Box K-174, The Oil and Gas Journal, Tulsa, Oklahoma.

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REMEMBER EAST TEXAS

When all other methods fail, employ my divining or dowsing method. If oil exists this method finds it. Faults, broken, treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates. George Miller, 1548 Post, Torrance, Calif.

Percentage producing wells
INCREASED
Percentage dry holes
DECREASED
Investigate PETROMETER surveys.
P. O. Box 528 Tulsa, Okla.

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CAPITAL SEEKERS

Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

AMERICA'S 83 leading underwriters who bought a billion of securities 1938. $3.00. JOHN MORRIS, 1040 South Paxon, Philadelphia, Penna.

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We are in a position through our service to help in preparation and presentation of meritorious issues of stocks or bonds to investment bankers and dealers. Write for full particulars.

BROWN HARTWELL COMPANY
110 East 42nd Street
New York, N. Y.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Equipment Wanted

WANTED—Second hand Wilson-Snyder, Gardner-Denver or Union Tool 14 or 16 power pump. Full particulars first letter. R. C. Halstead, 612 Gulf States Building, Dallas, Texas.

For Sale—Equipment

FOR SALE: Two 6' x 42' Smithweld Pressure vessels with 3" wall. The National Refining Co., Hanna Bldg., Cleveland, Ohio.

FOR SALE OR LEASE—Class E Sanderson Cyclone 1,500-ft. drilling machine located in Ohio. Address Box K-123, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—1-10,000 bbl. bolted Tank. Also equipment for both 1,000 and 2,000 bbl. Skimming Plants. Western Tank & Road Supply Co., Wichita, Kansas.

FOR SALE — Wilson Winch used in Okla. City field. Also spudding attachment and all tools necessary for drilling, cleaning out, swabbing, or drilling in well. Also lighting equipment, steel dog house, etc. Winch mounted on 7 ton Mack truck. Ray Holman, 320 S.E. 36th St., Phone 7-2669, Oklahoma City, Okla.

14—17⅛ x 20, 1—7½ x 20 Bessemer; 2—5½ x 20, 2—7¼ x 20 Clark Compressor Cylinders in A-1 Condition.

NOLAN SALES CORPORATION
Tulsa, Okla. —— Seminole, Okla.

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50,000 feet of 2" line pipe.
20,000 feet of 6" line pipe.
Located in Oklahoma.

We also have in Shreveport, Louisiana, a complete stock in all sizes —Line Pipe, Casing, Drill Pipe.

Branches in La-Ark-Tex area; also at St. Elmo, Illinois.

Wire, write or phone.

Louisiana Iron & Supply Company
Shreveport, Louisiana

TRACTORS

Government crawler type Caterpillars, 5 ton $375, 10 ton $695, Slightly used. Perfect condition.

O. C. EVANS
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FOR Sale: Wax presses, chillers, pumps, valves, fittings, boilers, tanks, etc. Attractive prices. Can be inspected at our plant, Marietta, Ohio. The National Refining Co., Hanna Bldg., Cleveland, Ohio.

FOR SALE—SACRIFICE PRICE

TEN Complete Rotary Drilling Rigs. Steam and Diesel Powered. Large and Small.

Large Amount of Extra Drilling Equipment, Boilers, Engines, Pumps, etc.

TEN White Trucks Equipped for Oil Field Hauling.

All equipment in good condition and modern. Will sell any part or all. Especially suited for foreign country. Write me your wants.

ED. BRIGHT
606 N. Field St. Dallas, Texas

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.

Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
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THE NATIONAL SUPPLY CO.
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6 Gas or Oil Storage Tanks Sizes: 18 to 35 ft. in length, ¼ to ⅝ in. thickness, 10 ft. diameter. For more information write

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Real Estate

BEAUTIFUL COUNTRY HOME

For sale: Built mostly of native rock from many parts of the U. S. Very modern, only a few moments drive to fine county seat town in heart of central Kansas WHEAT and OIL belt. Ideal for retirement, or those desiring such environments of a few acres of best ground with it, and shady flowing stream and fishing. See this fine country home. Address Box K-173, The Oil and Gas Journal, Tulsa, Oklahoma.

FOR Lease: Warehouse Houston—10,000 sq. ft., car level, sprinkler system, elaborate offices. For details—Knox Warehouse, Houston, Texas.

La.-Ark. Fields

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NORTH LOUISIANA COMPLETIONS

Caddo—Caddo Parish

Joe Strahan No. 1 Stiles, 3,365 ft. north and 473 ft. east of SW cor. Section 29-21-16, pumping 60 bbl. per day, total depth 2,397 ft.

Rodessa—Caddo Parish

East Texas Refining Co. No. 1 North Central Texas Oil Co., 662 ft. west and 486 ft. north of SE cor. SW Section 4-23-15, 210 bbl. per day, heading through open tubing; used 3,000 gal. acid, total depth 6,086 ft. East Texas Refining Co. No. 1 Pill, 510 ft. north and 657 ft. east of SW cor. SE NW Section 4-23-15, 225 bbl. per day, heading through open tubing, used 5,000 gal. acid, total depth 6,110 ft.

Shreveport—Caddo Parish

Lisbon Iberia Oil Co. No. 1 Arkins, 566 ft. south and 640 ft. east of NW cor. NE Section 3-17-14, 11 bbl. per hour, ⅛-in. choke, tubing pressure 500 lb., casing pressure 975 lb., porous lime 5,626-38 ft., set 5½-in. casing 5,627 ft., total depth 5,640 ft.

Vivian—Caddo Parish

H. H. Groneman No. 1 Browning, 330 ft. from SW cor. Section 22-22-16, pumping 50 bbl. per day, total depth 2,631 ft., old total depth 2,695 ft. H. H. Groneman No. 1 Lee, C SW SW NW Section 22-22-16, dry and abandoned 2,685 ft. W. R. Nicholson Oil Co. No. 1 Lane, SE SE SE Section 28-22-16, dry and abandoned 2,485 ft. Tippett Oil Co. No. 1 Bell, SW SW NW Section 34-22-16, pumping 25 bbl. per day, total depth 2,460 ft. Tippett Oil Co. and others No. 3 Thigpen-Herold, 2,310 ft. north and 1,650 ft. east of SW cor. Section 34-22-16, dry and abandoned 2,510 ft.

Zwolle—Sabine Parish

Potter and others No. 1 Ebarb, 540 ft. from NE cor. SE Section 4-7-13, 275 bbl. per day, open tubing, total depth 2,182 ft.

Munroe—Union Parish

W. E. Hope Gas & Oil Co. No. 1 Union Power, 660 ft. west of SE cor. SW Section 36-22-3e, 7,000,000 cu. ft. gas, rock pressure 990 lb., total depth 2,222 ft.

ARKANSAS

Magnolia—Columbia County

G. H. Vaughn No. 2 D. B. Baker, C NE SE Section 15-17-20, 525 bbl. per day, ¼-in. choke, tubing pressure 1,250 lb., casing pressure 1,250 lb., total depth 7,575 ft.

Champagnolle—Union County

J. R. Lockhart No. 1 P. Jerry, 665 ft. west and 235 ft. south of NE cor. NE SE Section 15-17-14, 35 bbl. per day open tubing, oil sand 2,612-17 ft., set 7-in. casing 2,606 ft., total depth 2,617 ft. V. R. Sims and others No. 1 J. A. Kelly, 330 ft. from SW cor. NW SW Section 9-17-14, dry and abandoned, total depth 3,508 ft.

EAST TEXAS BORDER

M. D. Fitzwater No. 1 Terry, W. Coor Sur., completed estimate 5 bbl. per hour, total depth 2,381 ft., cored saturation in Tokio sand 2,366-75 ft., shut in.

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